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Editor's Notebook

This issue of *Rural Development Perspectives* features several articles devoted to the problem of rural poverty. Leslie A. Whitener and Timothy S. Parker begin with the minimum wage issue. Recent proposals in Congress would increase the minimum wage to $6.15 per hour, a dollar higher than the current rate. Whitener and Parker conclude that rural areas would be more affected by the change than urban areas and that the change would largely benefit full-time, adult workers and many who now live in poor families. The proposed increase would not entirely make up for the effects of inflation but, in conjunction with the Earned Income Tax Credit, would raise many poor families above the poverty line.

The Empowerment Zone/Enterprise Communities program is the most recent and wide-ranging effort by the Federal Government to target rural development assistance to the neediest areas. J. Norman Reid describes the program and its early results. By encouraging communities to make long-term plans with clear benchmarks and by providing funding over a 10-year period, the EZ/EC program has fostered local initiative and boosted morale. Already the program has created thousands of new jobs and improved the infrastructure in the 33 communities affected by the initial round.

One region that has received special Federal assistance for a number of years is Appalachia. Faqir S. Bagi, Richard J. Reeder, and Samuel D. Calhoun find that, while Appalachia as a whole receives relatively high levels of Federal funds, rural Appalachian counties receive less per capita than urban ones. Among rural counties, mining counties and those with high poverty got the most benefit from income support payments but less from development programs. Changes in Federal policy could significantly help the region.

Economic restructuring has caused millions of American workers to lose their jobs. In the 1980's, rural areas suffered disproportionately from worker displacement, especially in goods-producing industries. Karen Hamrick's article reveals that in the 1990's, rural and urban areas have had equal displacement rates. Nonmetro displaced workers between 1993 and 1995 were less educated but found jobs faster and lost less in earnings than their metro counterparts.

Financial markets serve rural areas well, according to Robert N. Collender, Patrick J. Sullivan, Daniel L. Milkove, and Faqir S. Bagi. Interest rates and other loan terms are comparable in rural and urban areas. Funds have been ample for rural loans but the structure of rural financial markets remains a cause for concern. Small rural communities often have less competitive financial markets, which can put them at a disadvantage because of the segmented nature of financial markets.

Proposed new tobacco legislation could have important repercussions for tobacco-growing communities, according to Fred Gale's article. Recent and proposed changes in tobacco laws may reduce demand for tobacco products and end the tobacco program, which has protected farm income. Tobacco no longer accounts for a high percentage of income in most tobacco areas, but the ending of programs would likely hurt those areas with high production costs and small farms.

Our indicators article by Penni Korb focuses on farmers and their spouses who spend time working off the farm. The 1994 Agricultural Resource Management Study survey asked respondents why they chose to work in off-farm jobs. In most farm households, at least one person works off the farm and such households usually have higher incomes than those where income comes from the farm only. More than a third of farm families used off-farm income to help pay farm expenses but most took outside work for reasons not related to farming. Off-farm jobs help even out the variability of farm income.

Douglas E. Bowers

Feature Articles

Indicators

Leslie A. Whitener and Timothy S. Parker

Increasing the Minimum Wage
Implications for Rural Poverty and Employment

Recent proposals to increase the minimum wage from $5.15 to $6.15 an hour would probably affect a larger share of rural than urban workers. The greatest effect would be in the South and Southwest where poverty rates are high and industries typically offer low wages. An increase of this magnitude would by itself have little effect on reducing poverty in either rural or urban areas, but combined with the Earned Income Tax Credit, could hold promise for lifting many minimum wage workers and their families out of poverty.

The minimum wage was last increased in September 1997, rising from $4.75 to $5.15 an hour. Since that time, several proposals to further increase the minimum wage have been considered by both Houses of Congress. In January 1999, both the U.S. Senate and the U.S. House of Representatives introduced bills to raise the minimum wage under the proposed Fair Minimum Wage Act of 1999 (H.R. 325 and S. 192). These bills are currently being considered in this session of Congress. Supported by the administration, these bills are designed to improve the incomes of low- and lower-middle-income workers whose wages have failed to keep pace with the cost of living. If the Fair Minimum Wage Act of 1999 passes, it will increase the minimum wage from the current $5.15 an hour to $5.65 an hour on September 1, 1999, and to $6.15 an hour on September 1, 2000.

The prevalence of low-wage jobs in rural areas suggests that a larger share of rural than urban workers would be affected by new legislation raising the minimum wage. The objectives of this study are twofold: (1) to determine what types of rural workers would benefit most from a minimum wage increase, and (2) to assess what such an increase would mean for workers, employment, industries, and poverty in rural areas.

Leslie Whitener and Timothy Parker are sociologists in the Food Assistance, Poverty, and Well-Being Branch of the Food and Rural Economics Division, ERS.

A Minimum Wage Increase More Likely To Affect Rural Workers

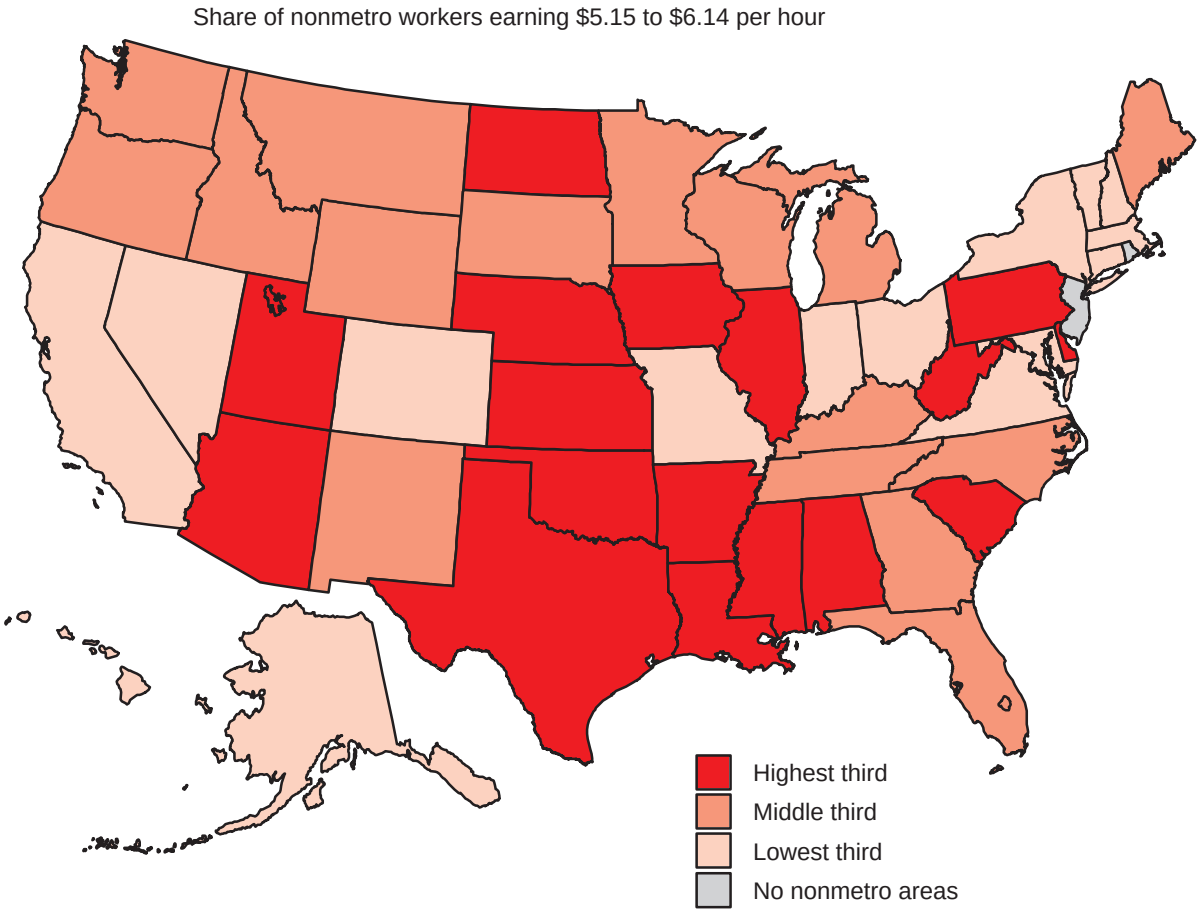
An increase in the minimum wage would have a greater benefit for nonmetro than metro workers, according to analysis of data from the Current Population Survey (CPS) 1997 and 1998 microdata earnings files (see "Data Sources"). An average of 2.3 million nonmetro workers, or 11 percent of the nonmetro wage and salary workforce 16 years and older, earned $5.15 to $6.14 an hour between April 1997 and March 1998. These workers are most likely to be affected by the increase in the minimum wage to $6.15 an hour. In contrast, about 8 percent of metro workers fell within this earnings category. The number of both metro and nonmetro workers who would actually receive the minimum wage increase may be overstated because some of these workers were in exempt jobs, while others were being paid less than the minimum wage in violation of the law.

The greatest impact of this minimum wage increase on rural workers would likely be felt in the South and Southwest. States with the highest proportion of nonmetro workers earning between $5.15 and $6.14 per hour include Louisiana (18 percent), Arkansas (17.1 percent), and Mississippi (16.7 percent) (fig. 1). These States generally have high concentrations of lower paying jobs and relatively high poverty rates. In contrast, States least likely to be affected are concentrated in the West and Northeast. Alaska (3.6 percent), Nevada (4.3 percent), California (4.5 percent), and New Hampshire (5.1 percent) have the lowest proportion of workers likely to benefit from the proposed legislation. Several of the States with a low percentage of affected workers have set State mini-

Figure 1

Workers most likely to gain from an increase in the minimum wage, by State, 1997-98

Nonmetro workers in the South and Southwest are more likely to benefit



Source: Calculated by ERS using 1997-98 Current Population Survey earnings data.

mum wages higher than the Federal minimum wage, and most have higher concentrations of better paying jobs.

The Issues

Debate over the effects of an increase in the minimum wage has focused on several issues. Some labor market analysts have argued that the increase will restore some of the purchasing power of minimum wage workers lost during the 1980's when the minimum wage did not keep pace with inflation. But they argue that even after this latest proposed increase, the minimum wage would remain too low to provide low-wage workers with an adequate standard of living (Bernstein). Other analysts suggest that the increase in the minimum wage will lead to reduced employment opportunities for lower skilled workers and new entrants into the labor force as employers cut back jobs in response to higher labor costs (MacPherson). Still others question whether the benefits of this increase will indeed go to the neediest, often citing part-time teenage workers who rely on their parents for most of their support as the prime beneficiaries (Cole). The prevalence of low-wage jobs and low incomes in rural areas suggests that these issues have particular relevance for understanding the effect of the proposed increase in minimum wage on rural workers and industries.

We address four questions in this study:

- Will the increase in minimum wage restore rural workers' purchasing power?
- Will the proposed minimum wage increase help reduce poverty rates?
- Are the rural beneficiaries of the increase truly needy?
- Are rural job losses likely?

Minimum Wage Increase Would Restore Only Part of Purchasing Power Lost to Inflation

After taking inflation into account, the purchasing power of the minimum wage has fallen considerably over time. Even with an increase to $6.15 in 2000, the value of the minimum wage would remain well below its historic high and would make up only half of the value lost to inflation during the 1980's (see "The Minimum Wage"). To restore the average purchasing power of the 1970's

The Minimum Wage

The Fair Labor Standards Act (FLSA) was enacted in 1938 to establish minimum wage, overtime pay, and child labor standards for U.S. workers. Since its introduction, the minimum wage has been increased 20 times in an effort to keep pace with inflation. The minimum wage last increased in September 1997 from $4.75 to $5.15 an hour. The U.S. Department of Labor estimates that over 80 million nonsupervisory employees in the private and government sectors are subject to minimum wage provisions under the FLSA, accounting for about 90 percent of the employed workforce.

Businesses required to pay the minimum wage include enterprises engaged in interstate commerce; any firm with annual gross sales of $500,000 or more; hospitals, schools, and institutions of higher learning; Federal, State, and local government; and employers of some domestic service workers. Some groups are excluded from coverage such as executive, administrative, and professional employees, employees of seasonal amusement and recreation establishments, employees engaged in fishing operations, casual babysitters and persons employed as companions to the elderly or infirm, and hired farmworkers employed on smaller farms. Also, establishments with annual gross sales of less than $500,000 are not required to pay the minimum wage to their employees.

The current legislation contains special provisions for workers who receive tips. Their employers are required to pay a minimum wage equal to half of the hourly minimum wage and must provide more if the employees do not collect enough tips to earn the new minimum wage rate. Also, the law's "training wage" provisions allow the payment of a lower hourly rate for teenagers during the first 90 days of the job. In addition, the last minimum wage legislation enacted in 1996 provides tax breaks worth $5 billion over 10 years for small businesses to help ease the burden of paying the higher minimum wage.

Minimum wage, 1950-2000, in current and 1997 dollars
The minimum wage has not kept pace with inflation

Note: Real wage rates in 1997 dollars adjusted with Consumer Price Index; 1999-2000 data are projected.
Source: U.S. Department of Labor.

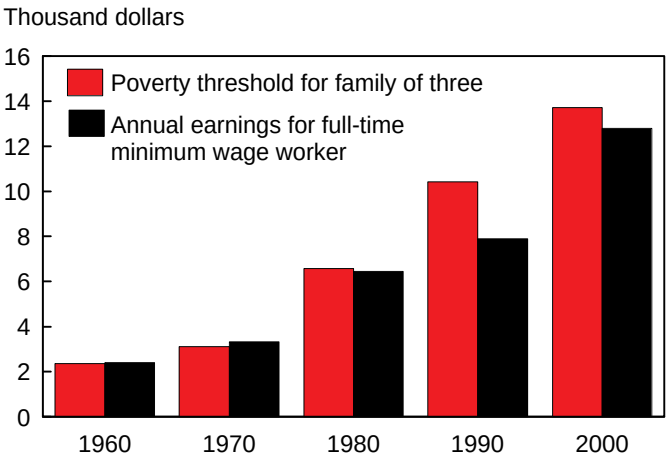
would require an increase to $6.50; an even higher increase—to $7.30 an hour—would be needed to restore the highest value, in 1968.

Furthermore, changes in the minimum wage have not kept pace with changes in the wages of other workers in the economy. In 1968, the minimum wage peaked at 56.1 percent of the average hourly earnings of nonsupervisory or production workers in private nonagricultural industries. With the new wage increase, we estimate that the minimum wage will account for 45 percent of the projected average nonsupervisory hourly wage in 2000. Because hourly wages are considerably lower in rural than urban places, the minimum wage in nonmetro areas would be a larger share of average wages.

Increases in the Minimum Wage Alone Will Not Reduce Poverty Rates

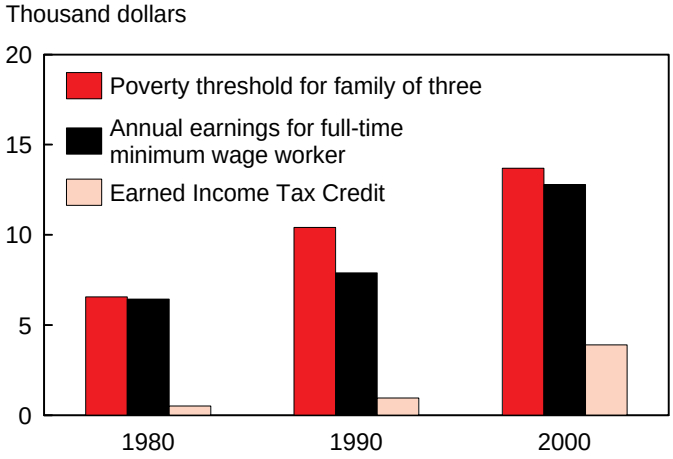
A primary goal of minimum wage legislation is to guarantee that individuals making a major commitment to paid employment are able to provide their families with an adequate standard of living. During the 1960's and 1970's, the earnings of a person working full-time at the minimum wage for the entire year typically were enough to lift a family of three out of poverty without considering other sources of income. Full-time, year-round earnings

Figure 2
Minimum wage workers and the poverty threshold
Earnings of a full-time, full-year minimum wage worker cannot lift a family of three out of poverty, but...



Note: Data for 2000 are projected.
Source: Calculated by ERS from Bureau of Labor Statistics data.

Figure 3
Minimum wage workers and the Earned Income Tax Credit
...the proposed increase plus the Earned Income Tax Credit could raise a family of three above the poverty threshold



Note: Data for 2000 are projected.
Source: Calculated by ERS from Bureau of Labor Statistics data.

at the minimum wage have declined relative to poverty thresholds since then, however, because poverty thresholds are adjusted to account for changes in inflation, while the minimum wage is adjusted only periodically. In 1997, a person working 40 hours per week for 52 weeks at the current minimum wage ($5.15) earned $10,700, about $2,000 a year less than the poverty line for a family of three. By the year 2000, a full-time, full-year minimum wage worker earning $6.15 an hour would earn $12,792, and continue to be about $1,000 per year short of the estimated poverty line for a three-person family (fig. 2).

The minimum wage increase alone is likely to have little effect on reducing poverty. However, when combined with the Earned Income Tax Credit (EITC), the after-tax incomes of many minimum wage workers would rise above the poverty level. The EITC is a refundable tax credit available to low-income workers who satisfy certain income and eligibility criteria (Durst). For example, a full-time, full-year minimum wage worker with two children could receive as much as a $3,900 tax refund through EITC, raising income for a family of three above the estimated poverty level for the year 2000 (fig. 3).

These comparisons have important implications for nonmetro areas where almost two-thirds of the poor were in families of three or more in 1996. Almost half of these were families with single parents and children—family situations where no other family member is likely to work.

Increase Would Benefit Many of the Truly Needy

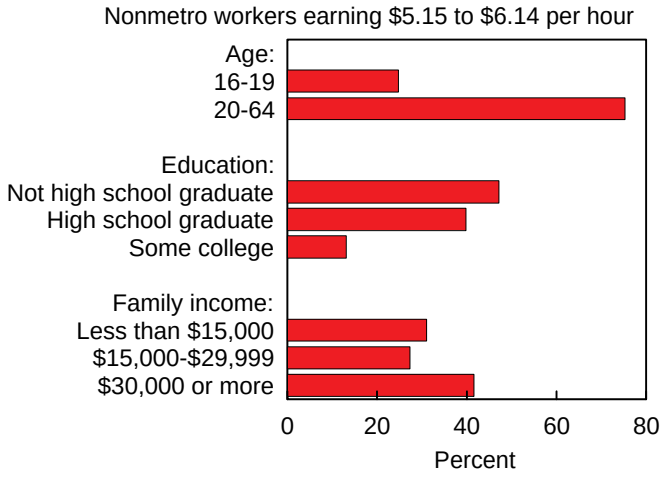
Some analysts have questioned the usefulness of increasing the minimum wage as an antipoverty mechanism, arguing that a large share of the workers who will receive the increase are part-time and teenage workers living in nonpoor families who have a weak attachment to the labor force (Cole). Our analysis suggests that the minimum wage increase in rural areas would primarily affect adults and unmarried women. Most of the likely beneficiaries are women (63 percent), White (85 percent), people 20 and older (77 percent), and people who are not married (66 percent) (fig. 4). However, Blacks, Hispanics, and teenagers are disproportionately represented among those likely to benefit. For example, almost 25 percent of nonmetro teenagers would likely benefit from this increase in the minimum wage although they represent only 7 percent of nonmetro wage and salary workers.

Also, a substantial number of rural workers who would be affected by the increase have a strong attachment to the labor market. About 60 percent are full-time workers, and an additional one-third work 20-35 hours per week. Poverty measures are not available from the CPS earnings file, but family income and size data suggest that a large proportion of those who would benefit from the minimum wage increase are likely to be poor. About 31 percent of minimum wage workers lived in families with incomes below $15,000 and most lived in families with four or fewer family members in 1997. The poverty threshold for a family of four in 1997 was $16,404, suggesting that many of the rural beneficiaries would fall below the poverty guidelines.

Figure 4

Characteristics of minimum wage beneficiaries

Prime-aged, less educated, and low-income workers are most likely to benefit

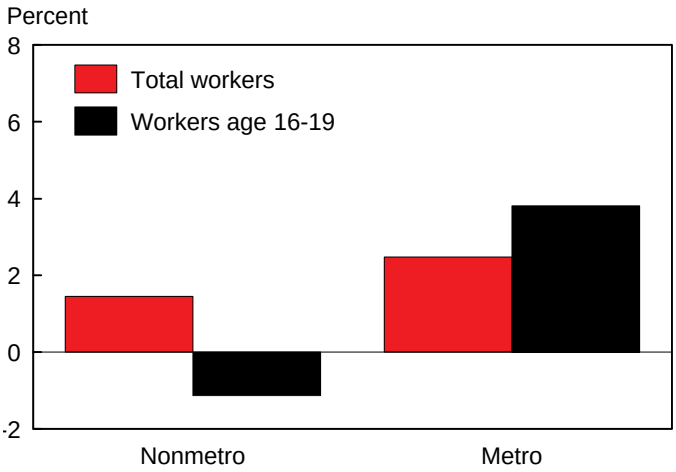


Source: Calculated by ERS using 1997-98 Current Population Survey earnings data.

Figure 5

Employment change, third quarter, 1996-97

There is no evidence of job loss for nonmetro workers after the 1996 minimum wage increase; decreases in teenage employment were not statistically significant



Source: Calculated by ERS from 1996 and 1997 Current Population Survey data.

Rural Job Losses Are Not Likely

Economic theory suggests that a higher minimum wage will reduce employment opportunities for lower skilled workers and new labor force entrants as employers cut back jobs in response to higher labor costs. A number of recent studies have suggested that when the minimum wage is at especially low levels, as it is today, the employment effects of a moderate increase are likely to be minimal (Bernstein; Card and Krueger; Schmitt). Analysts contend that a higher minimum wage can make it easier for employers to fill vacancies and may decrease employee turnover—situations that could increase employment (Greenstein). Also, during the last several years, the economy has been particularly robust, with low unemployment rates, minimal inflation, and general job growth—conditions likely to reduce disemployment effects (Gibbs; Nord).

Several recent studies assessing the employment effects of the last minimum wage increase, which occurred in September 1997, have suggested that substantial numbers of teenaged workers were displaced by the increase (Cole; MacPherson). An examination of changes in metro and nonmetro employment between third-quarter 1996 (before the first increase) and third-quarter 1997 (including the first increase) at first suggests that nonmetro teenagers were hurt most (fig. 5). However, a nonmetro employment decline of only 17,000 workers age 16-19 (less than 1 percent) indicates a lack of job growth for nonmetro teenagers, but not a loss of jobs. In contrast, employment increased for total nonmetro workers, total metro workers, and metro teenagers. While much of the minimum wage debate has been about jobs, some analysts contend that the larger effect on workers may be through a cut in hours and an increase in part-time employment. Examination of changes in part-time employment and labor force participation between third-quarter 1996 and 1997 from the CPS earnings file does not support this hypothesis in either metro or nonmetro areas for adults or teenagers.

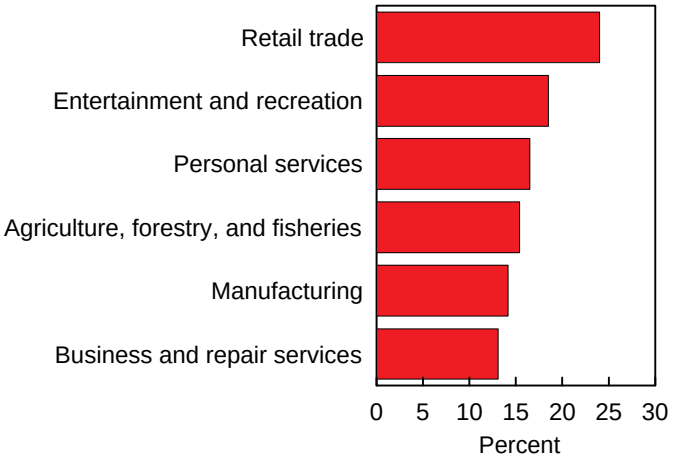
Although job losses would probably be minimal, nonmetro areas may experience more employment displacement than urban areas since the increased minimum wage affects a larger share of rural than of urban workers and typically would raise their wages by a larger amount. The increase in the minimum wage would affect rural employers in some industries more than others. Large shares of nonmetro workers in retail trade (24 percent); entertainment and recreational services (18.5 percent); personal services (16.5 percent); and agriculture, forestry, and fisheries (15.4 percent) earned between $5.15 and $6.14 in 1997-98 (fig. 6). Labor costs in rural industries facing stiff global competition could be especially sensitive to increases in the minimum wage, and some job loss could occur with another increase in the minimum wage. Also, the 1996 legislation authorized tax breaks aimed at small businesses to help ease the burden of paying the higher minimum wage, but even now the effectiveness of these measures has not been measured.

Further research to account for regional differences, changes in the economy, other labor force behavior, and other indicators of labor market stress is needed to fully assess the impact of the last minimum wage increase on rural and urban workers, but the CPS data analyzed here appear to lend little support to the idea that increases in the minimum wage lead to job displacement.

Figure 6

Nonmetro industry share of workers earning $5.15 to $6.14, 1997-98

Higher nonmetro labor costs would likely displace few workers, but some industries could be affected more than others



Source: Calculated by ERS from 1997-98 Current Population Survey earnings file.

Conclusions

The last increase in the minimum wage stimulated considerable debate on several employment and economic issues. Some recent studies have suggested that those most likely to benefit from increases in the minimum wage are teenagers working part-time who rely on their parents for most of their support. Our analysis of CPS data suggests that many of the rural workers likely to be affected by the proposed increase in the minimum wage are strongly committed to the labor force and are not predominantly teenagers and part-time workers living in nonpoor families. However, nonmetro teenagers, part-time workers, and those with low education levels may be disproportionately helped by the increase in minimum wage because many work in retail sales and service industries—industries most likely to be affected by an increase in the minimum wage. Other recent studies suggest alternatively that teenagers are most likely to be displaced from their jobs as industries cut employment to reduce the cost of the increase. Our findings do not show a job loss for metro or nonmetro teenagers following the last minimum wage increase, although employment for nonmetro teenagers did not grow as it did for other groups of workers. Data are just now becoming available to assess the effects of the last minimum wage increase. More refined analyses will provide a better understanding of the economic and employment effects of the proposed increase in the minimum wage.

It is clear, however, that the minimum wage has not kept pace with inflation, and even the combination of the 1996-97 increase, along with the proposed increase by 2000, will not completely restore the purchasing power of the minimum wage seen during the 1970's. Although the minimum wage increase alone will have little effect on reducing poverty in either metro or nonmetro areas, its combination with the EITC holds promise for lifting many minimum wage workers and their families out of poverty. The minimum wage is not a tightly targeted antipoverty measure, but the proposed increase considered here is likely to benefit many low-income rural workers and their families.

For Further Reading. . .

Jared Bernstein, "Another Modest Minimum Wage Increase," Issue Brief #124, Economic Policy Institute, Washington, DC, Feb. 23, 1998. Available online: <http://www.epinet.org/ib124.htm>.

David Card and Alan B. Krueger, *Myth and Measurement: The New Economics of the Minimum Wage*, Princeton, NJ: Princeton University Press, 1995.

Rebel Cole, "1996 Minimum Wage Hike: Job Loss in a Booming Economy," Employment Policies Institute, Washington, DC, Jan. 1998. Available online: <http://www.epionline.org/minimum.htm>.

Ron Durst, "Federal Tax Developments Limited to the Earned Income Tax Credit," *Rural Conditions and Trends*, Vol. 7, No. 2, 1997, pp. 65-66. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat72/rcat72m.pdf>.

Robert Gibbs, "Rural Earnings Edge Up in the 1990's," *Rural Conditions and Trends*, Vol. 8, No. 2, 1997, pp. 22-25. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat82/rcat82f.pdf>.

Robert Greenstein, *Raising Families with a Full-Time Worker Out of Poverty: The Role of an Increase in the Minimum Wage*, Washington, DC: Center on Budget and Policy Priorities, May 1996.

David MacPherson, *Effects of the 1998 California Minimum Wage Increase*, Washington, DC: Employment Policies Institute, March 1998.

Lawrence Mishel, Jared Bernstein, and Edith Rasell, *Who Wins with a Higher Minimum Wage*, Washington, DC: Economic Policy Institute, 1995.

Mark Nord, "Rural Poverty Rate Edges Downward," *Rural Conditions and Trends*, Vol. 8, No. 2, 1997, pp. 31-34. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat82/rcat82h.pdf>.

Timothy Parker and Leslie Whitener, "Rural Workers Will Benefit More Than Urban Workers from Increase in Minimum Wage," *Rural Conditions and Trends*, Vol. 8, No. 1, 1997, pp. 48-52. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat81/rcat81h.pdf>.

John Schmitt, "The Minimum Wage and Job Loss: Opponents of Wage Hike Find No Effect," Briefing Paper, Washington, DC, Economic Policy Institute, Jan. 1996.

Data Sources

We used the Current Population Survey (CPS) microdata earnings files for April 1997 through March 1998 to explore issues related to the proposed minimum wage increase. The earnings file is an extract of basic labor force items asked in each monthly CPS survey. In addition to the basic labor force questions, respondents in their fourth and eighth months of the sample rotation are surveyed about various aspects of their job earnings. These include such items as usual hours worked the previous week, usual earnings per week, and hourly pay rate. In 1997, the CPS earnings file had an unweighted sample size of about 175,000 adults. The CPS monthly files are pooled to create a file from which annual averages are computed. This file allows us to use very current quarterly data and still adjust for seasonality of employment. Our analysis focuses on those workers who earned between $5.15 and $6.14—the group most likely to be affected by the proposed increase in the minimum wage.

Hourly earnings can be estimated several different ways using the CPS data. The question on earnings per hour is asked directly if the respondent is an hourly worker. However, the question is not asked if the respondent is a salaried worker. The result is that about 40 percent of total workers are not asked this question. Alternatively, total hourly earnings can be computed by dividing usual weekly earnings by usual weekly hours for wage and salary workers 16 and older. By using total hourly compensation, we can take into account remunerations—such as tips, overtime, and commissions—that are not otherwise included in a straight hourly wage. Also, it gives us estimates for salaried and other nonhourly workers who would not otherwise have an hourly wage rate. Many of these nonhourly workers have low earnings because of low salaries, or very high weekly hours, or both. However, in some cases, this measure of hourly compensation is more imprecise. According to research from the Bureau of Labor Statistics, respondents are more likely to underreport total weekly earnings than hours, so the computed hourly earnings from some workers may be lower than their actual earnings.

J. Norman Reid

Community Empowerment
A New Approach for Rural Development

The 1993 legislation creating the Empowerment Zones and Enterprise Communities program represents a departure in Federal policy toward developing low-income rural and urban communities. By combining flexible, long-term financing with strategic planning and performance benchmarking, the program helps impoverished communities to address structural problems comprehensively, rather than applying "stovepipe" programs to isolated issues. Although the program is only 3 years into implementation, the results are already remarkable. Rising congressional interest in the program's success points to an expansion of the empowerment approach in coming years.

The Empowerment Zones and Enterprise Communities (EZ/EC) program was enacted into law as part of the Omnibus Budget Reconciliation Act of 1993 (Liebschutz). That act authorized 9 Empowerment Zones (EZ) and 95 Enterprise Communities (EC) for round I of the program. Of these, 3 zones and 30 communities were to be established in rural areas. The Taxpayer Relief Act of 1997 authorized 20 round II Empowerment Zones to be designated by January 1, 1999; 15 of these were for urban areas and 5 for rural. The Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999 (P.L. 105-277) provided grant funding for these 20 round II rural and urban EZ's and authorized 20 additional rural EC's.

The EZ/EC legislation built upon earlier efforts under Federal and State legislation to establish enterprise zones by including tax credits and other supply-side incentives for business investment (see "Benefits for Rural Empowerment Zones and Enterprise Communities"). Unlike previous initiatives, EZ/EC added major new features that make it a very different program. Designated EZ's and EC's receive block grants that can be used for a wide range of purposes. Although an existing block grant program—the Social Services Block Grant (SSBG) program authorized by title XX of the Social Security Act—has been employed to fund round I, the eligible uses of these funds have been broadened to include virtually anything that might fall into a comprehensive community and economic development program. The funds, which are administered through State agencies—in most cases the same ones that administer the regular SSBG program—are to remain available throughout the 10-year period of the EZ/EC designations.

The principal difference between Empowerment Zones and Enterprise Communities is in the level and type of financial resources provided to them. Empowerment Zones receive much larger SSBG grants—$100 million for urban zones, $40 million for rural zones—than Enterprise Communities, which receive $2.95 million each. Businesses located in EZ's also receive tax credits and other tax incentives not available within EC's. By creating this two-tiered approach, Congress in effect established a test to determine

Eligibility Requirements for Round I Rural EZ's and EC's

Population: Up to 30,000

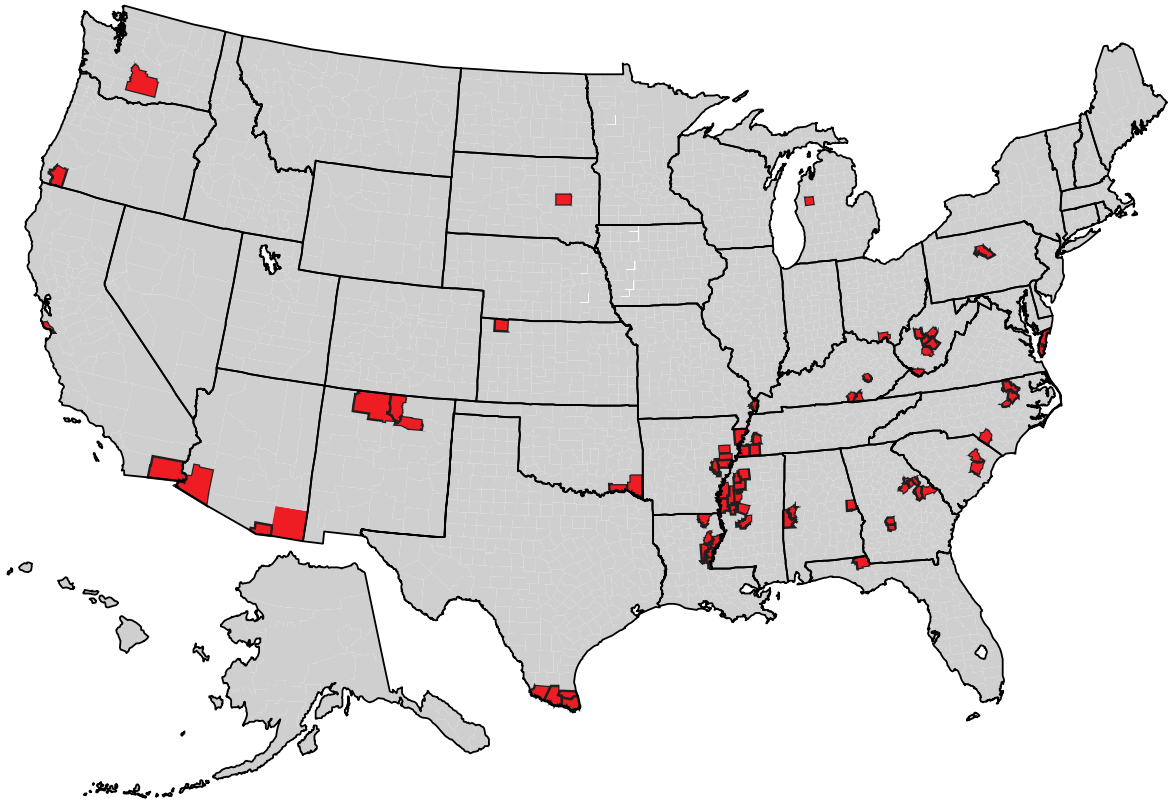
Area: Up to 1,000 square miles

Poverty rate: Minimum of 20 percent in all census tracts, 25 percent in 90 percent of the census tracts, and 35 percent in half of the census tracts; some waivers of these rates are possible

Distress: Area is one of pervasive poverty, unemployment, and general distress

J. Norman Reid is Associate Deputy Administrator, Office of Community Development, USDA Rural Development, and has been associated with the implementation of the rural Empowerment Zones and Enterprise Communities program since its beginning.

Figure 1
Counties with rural Empowerment Zones and Enterprise Communities



the importance of these financial incentives for stimulating development in high-poverty communities.

In important ways, the EZ/EC program is more of a community development program than an economic development program. Applications for EZ/EC designations were competitive and had to be supported by comprehensive, long-term strategic plans for development. The planning process itself had to include broad public participation, and not merely the product of a planning office or consulting firm. In effect, the application procedure constituted a significant process of community development, and communities that took the process seriously found themselves mobilized for action and in possession of an implementable plan. Recognizing the value of this planning process and the desirability of sustaining the progress made by the 227 round I applicants, USDA designated most unsuccessful applicants as Champion Communities and provided them with special financial and technical assistance to implement parts of their strategic plans. USDA in particular used the Champion Communities as the basis for significant outreach to spur development in these hard-to-reach communities and to date has invested some $290 million in its business and infrastructure development programs in these communities.

The program was unique in one other respect; communities were defined not on the basis of existing political subdivision boundaries but on census tracts. Tracts were eligible according to a somewhat complicated combination of poverty rates, which assured that almost all areas had a minimum poverty rate of 20 percent and most had rates of 25 or 35 percent (see "Eligibility Requirements for Round I Rural EZ's and EC's"). The poverty rate requirements were most stringent for Empowerment Zones. Not surprisingly, although designated rural EZ/EC's are located in 24 States, they are concentrated in Appalachia, areas of historically high Black population along the east coast and across the South, and in Hispanic communities in the Southwest (fig. 1). The other major concentrations of poverty—on Indian reservations—were expressly excluded by the round I enabling legislation.

The Empowerment Staircase: Building Sustainability

Empowerment is no mere catchword. It is an approach to development that enables low-income citizens to improve their communities through active involvement in decisionmaking and project implementation. It replaces the "do for" or "do to" approach to governing by implementing a "do with" model.

It is helpful to think about empowerment as a process. One way to conceive the process is as a staircase—the empowerment staircase (see "The Empowerment

Staircase"). Communities in poverty often find themselves mired in hopelessness about the possibility of improving the incomes and living conditions of their citizens. In rural areas, they have been frequently bypassed by developments in the rest of society because of social or geographic isolation. Empowerment occurs as they discover that they have within themselves the power to achieve great results. As the process unfolds, their capabilities expand, their partnerships are enriched, and their self-confidence grows.

Helping impoverished communities to move from hopelessness into self-confidence may require some form of external intervention to provide the incentive and direction to start moving the community in a positive direction. Beyond that, however, it is essential to empowerment that the remaining steps be climbed by the community itself, and that governments and other organizations offer technical and financial assistance in support of the community's goals, as reflected in its strategy and workplan. In other words, the community itself must remain in the driver's seat.

Implementing the Initiative: Process

For the communities that participated in round I of the Community Empowerment Initiative, the application process itself provided the stimulus to move out of hopelessness toward the community's vision. Reflecting the importance of planning to the entire process, the applications consisted of a community-developed long-term, comprehensive strategic plan. Though often assisted by government and private community development agents, the plans were developed by the communities themselves, and were required to be the product of broad-based community participation that included low-income residents. USDA and HUD provided publications explaining the empowerment program and the strategic planning process, and held numerous workshops across the Nation to both publicize the competition and assist applicants in understanding and meeting its requirements.

President Clinton formally announced the competition on January 17, 1994, and the Notice Inviting Applications and Interim Rule governing the rural program were published the following day. Workshops were held during the succeeding 6 weeks. Applications were due on June 30, 1994, giving applicants less than 6 months to complete their strategic plans. Many, including applicants and the U.S. General Accounting Office (GAO), argued for more time to develop the plans. Designations of the 3 rural EZ's and 30 rural EC's were made on December 21, 1994.

After designation, communities were required to develop performance benchmarks for their strategic plans. Applying the statewide benchmarking process used in Oregon, communities were asked to develop work objectives for the next 2 years, establish baseline measures for their strategic plan objectives, and specify in measurable terms the expected results. USDA and HUD were required by the authorizing legislation to monitor community progress, and in cases of insufficient progress, they could de-designate EZ/EC's. This benchmarking process was difficult for communities to complete. Benchmarking was not only new to them, but to USDA and HUD officials as well. Accordingly, much of 1995 was spent in developing benchmarks, finalizing the Memoranda of Agreement (MOA) among the Federal Government, the State agency that administers the SSBG funds, and the community. To help expedite operations by the EZ/EC's, USDA authorized communities to begin immediate drawdown of SSBG funds for administrative costs. This enabled communities to establish the organizations that would implement their strategic plans and hire the staff who would do the community's business.

Outcomes: Short-Term Achievements Are Impressive

As of 1998, the rural Empowerment Zones and Enterprise Communities were just about 3 years into implementation of their strategic plans. While most of the 10-year period of their strategic plans remains ahead of them, their achievements, nonetheless, have been significant in this short time.

One measure of their activity is use of funds. As of January 1998, the rural EZ/EC's had "drawn down" for expenditure $62.3 million, about 30 percent of the $208.5

The Empowerment Staircase

For impoverished and neglected communities, community empowerment cannot be achieved in a single step, but requires a sequence of accomplishments—much like climbing the steps of a staircase. For each community, these steps may come in different order, but in all communities they will require development over a period of years. They include the following:

Building hope that a different, better future is possible

Creating a vision of a better future and a strategy for achieving it

Turning the strategy into a concrete workplan with measurable objectives

Finding resources to implement parts of the workplan

Achieving initial successes that build confidence and relieve the most pressing needs

Refocusing actions to achieve long-term, sustainable goals

Revising the strategic plan to reflect changed conditions and experience from past projects

Leveraging additional funding from new sources

Building community capacity to plan, manage projects, and evaluate outcomes

Benefits for Rural Empowerment Zones and Enterprise Communities

The Omnibus Budget Reconciliation Act of 1993 provided block grants and tax benefits to round I zones and communities:

- Social Services Block Grants (SSBG):

  Zones—$40 million

  Communities—$2.95 million

- Tax benefits:

  Both—authority to issue tax-exempt private activity bonds

  Zones—20 percent wage credit for the first $15,000 of qualified wages paid to a zone resident who works in the zone; section 179 expensing of business capital investments up to $20,000

- Subsequent legislation gave tax benefits for special invest ments to round I and round II zones and communities:

  Tax deductions for certain brownfields cleanup expenses

  Work Opportunity Tax Credits (WOTC) for 40 percent of first $6,000 of first-year wages for "high risk youth" who live in zone or community

- The Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999, provided first year funding, to be administered by USDA, for round II zones and communities:

  Zones—$2 million each

  Communities—$250,000 each

million in SSBG funds that was awarded to them upon designation. While some criticism of this pace has been made by those who wished to see an immediate "capital shock" to local economies, USDA urged the communities to pace their spending carefully so that these flexible funds would be available throughout the implementation period. Only 3 of the 33 rural communities had drawn down all of their funds as of January 1998, and even so, this did not indicate immediate spending; one of these communities "spent" its funds by investing them in certificates of deposit (CD's) to capitalize local revolving loan funds, which would then operate in perpetuity. The fact that 30 percent of the funds had been used at 3 years into the 10-year period suggests that the rural EZ/EC's have followed USDA's advice about pacing their expenditures.

The SSBG funds, in fact, amount to a fairly small share of the total investments the rural EZ/EC's have been able to apply to implementation of their strategic plans. As of January 1998, the 33 rural communities had received almost $680 million from all sources (table 1). By far, the largest share of these funds came from other Federal programs, especially rural development programs operated by USDA itself. But private sector investments accounted for a quarter of all funds, and State dollars were a sixth. Overall, the EZ/EC's have acquired $10 from other sources for every $1 from their SSBG grants.

The amount of funds received is a measure of resources available for use. But what have the communities achieved? Even though implementation is only about one-third completed, communities have reported some impressive numbers. Job creation was a principal objective for these communities, the workforces of which are typically characterized by high unemployment and underemployment, low wages, and high rates of poverty. As of January 1998, USDA's Office of Community Development reported that the rural zones and communities had created or saved 9,944 jobs.

Meeting pressing gaps in public infrastructure and expanding the availability of community services was another principal objective of the EZ/EC communities' strategic plans, and many of the reported actions address these issues. By January 1998, 110 water and waste-disposal projects were under construction, and 2,140 housing units, 78 educational facilities, and 29 health care facilities had been built or renovated.

Creating new businesses, raising the skills of local workers, and promoting entrepreneurship was another critical area for most communities. Rural EZ/EC's have established 102 revolving loan or microlending funds, created 61 job training facilities, began 98 job training programs, and trained 14,229 workers. Computer training for workers and area youth is a priority in many of the communities, and about 130 computer learning centers have been established or upgraded. Bringing local schools into the information age is a related objective, and many have made visible progress toward this objective, aided by USDA, which arranged for the donation of more than 4,400 excess Federal personal computers.

Addressing the needs of local youth was also a high priority of rural EZ/EC's. By January 1998, 212 youth development programs had been established, serving more than 25,000 youth.

In addition to results that can be measured numerically, observation of the communities indicates that most have

Table 1

Resource use by round I rural EZ's and EC's, January 1998

	Million dollars
Social Services Block Grants (SSBG)	62.3
Other Federal funds	276.5
State government	117.7
Local government	41.0
Private sector	170.1
Nonprofit	12.0
Total	679.6

Source: USDA Rural Development, Office of Community Development.

made considerable progress in climbing the empowerment staircase. Although some communities have progressed further than others, all have implemented some projects and leveraged funds from multiple sources. Aided by USDA-sponsored training for EZ/EC governing boards and staff members, the communities have made considerable progress in building the organizational capacity needed to ensure sustainability of their development programs. Many communities—some of which initially targeted low-wage industries as the quickest way to cut unemployment—have begun to promote industries that offer higher-wage, career-track jobs and to establish business ownership programs for low-income residents.

The benefits of the Community Empowerment Initiative extend far beyond the 33 designated communities. Over 180 unsuccessful applicants form the corps of rural Champion Communities, so designated by USDA because they succeeded in building local organizations and preparing a long-term, comprehensive strategic plan for development. USDA has provided about $290 million in rural development funding to projects in Champion Communities, held numerous workshops and networking conferences, provided onsite technical assistance, and published a regular newsletter to keep them informed about opportunities, techniques, and materials useful to implementing their strategic plans.

Implications for the Future

The Community Empowerment Initiative is in many ways an experiment in promoting the development of some of America's neediest communities. Not only does it contain within it two significantly different funding packages, it is novel in the degree of local control over objectives and implementation methods, the 10-year Federal commitment to the communities, the flexibility of the block grant funds, and the self-evaluation mechanism employed. While the experiment is still young, it is by no means too early to learn from its lessons.

In August 1997, the Taxpayer Relief Act of 1997 authorized a second round of Empowerment Zones, 15 urban and 5 rural. The statute provided tax benefits to the new zones, but grant funding had to be requested in separate legislation. The Clinton administration requested $1.7 billion over 10 years for Social Services Block Grants to round II zones—the same level as for round I. In October 1998, Congress provided $55 million in first-year funding for the 20 round II zones, as well as $5 million in first-year funds for 20 new rural EC's. In April 1998, Vice President Gore announced the beginning of competition for the Round II designations and both HUD and USDA held an extensive series of regional workshops for applicants, whose strategic plans had to be submitted by October 9, 1998. The designations of round II EZ's and EC's were announced on January 13, 1999.

The round II legislation broadens eligibility for the EZ/EC program by lowering the maximum required poverty rate from 35 percent to 25 percent, making Indian reservations eligible for round II zones, and permitting one of the five rural zones to be designated in an area experiencing high population "emigration." One of the new rural EZ's and one of the round II EC's qualified based on outmigration. One EZ and four EC's are Indian reservations and another five EZ's and ECs include tribes as partners.

At the same time, Congress has shown considerable interest in expanding the initiative to include larger numbers of communities, broaden eligibility even further, and provide small amounts of funding to help applicants with the strategic planning process. In June 1998, Representative Maurice Hinchey (New York) introduced HR 4071, which would have used half of the title XX funds proposed for rural round II Empowerment Zones to fund 33 new rural Enterprise Communities at $3 million each, in effect creating a round III of the initiative. The Hinchey proposal would have also broadened program eligibility to include other criteria besides poverty and established a small program of grants to assist applicants develop their strategic plans. Similar legislation (S. 2418) was introduced in the Senate. Ultimately, Congress chose to add 20 rural Enterprise Communities without changing the eligibility criteria. Given the level of interest exhibited during the 1998 congressional debates, it seems likely that community empowerment is an idea whose time has indeed come, and that it has the potential to set the agenda for community development in the United States for years to come.

For Further Reading . . .

Cornelia Butler Flora, *Rural EZ/EC/Champion Communities: What Happened After Application?* Ames, IA: North Central Regional Center for Rural Development, June 17, 1996.

Sarah F. Liebschutz, "Empowerment Zones and Enterprise Communities: Reinventing Federalism for Distressed Communities," *Publius*, Vol. 25, Summer, 1995, pp. 117-32.

Richard Reeder, *Rural Enterprise Zones in Theory and Practice: An Assessment of Their Development Potential*, Staff Report No. 9307, USDA-ERS, March 1993.

U.S. Department of Agriculture, Rural Development, Office of Community Development, *Progress Report: Rural Empowerment Zones and Enterprise Communities Initiative*, April 1998.

U.S. Department of Agriculture, Rural Development, Office of Community Development, *Rural Empowerment Zones and Enterprise Communities: A Status Report*, Sept. 1996.

U.S. Department of Housing and Urban Development and U.S. Department of Agriculture, *What Works in the Empowerment Zones and Enterprise Communities*, Vol. 2, 1998.

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Federal Funding's Unique Role in Appalachia

Rural Appalachia received relatively low levels of Federal funds in fiscal year 1997 compared with urban Appalachia. Although it had relatively high income support payments, reflecting high rates of poverty and unemployment, rural Appalachia received less per capita in Federal funding for community resources and other programs that create jobs and development. Mining and poverty counties were the chief rural beneficiaries of income support payments, while the more populous and prosperous rural manufacturing and commuting areas benefited more from community resource programs. Some Federal policy trends may further the region's growth, particularly the recent increase in highway aid and changes in telecommunications, while environmental policy, welfare reform, and proposals to reduce or limit the growth of income support and economic development programs present challenges to the region.

The Federal Government's role in rural America varies by place and region, reflecting the diversity of rural America. In our last article on this topic (Reeder, Bagi, and Calhoun, 1998), we showed that the rural Great Plains, the Nation's breadbasket, relied heavily on agricultural programs. In Appalachia, with its low-wage manufacturing and mining industries and high levels of poverty and unemployment, more Federal assistance in rural areas goes to income support programs.

In this article, we use census data to examine the pattern of Federal funding in Appalachia in fiscal year 1997. By comparing Appalachia with the Nation as a whole, we show which programs are important to the region. The Appalachian Regional Commission (ARC) and the Tennessee Valley Authority (TVA) are Federal institutions unique to the region, so they receive particular attention. We conclude with some observations on recent Federal policy trends that have particular bearing on Appalachia.

Rural Appalachia Gets Relatively Low Amounts of Federal Funds

Over the years, Appalachia has received much attention for its geographic isolation, poverty, unemployment, and low education levels. These difficulties have attracted some unique forms of supplemental Federal assistance, such as the ARC and TVA programs, plus some more general assistance targeted to distressed areas and individuals nationwide. The region's effective representation in Congress has also attracted various Federal projects and installations to Appalachia.

Census data for fiscal year 1997 indicate that Appalachia's urban (metro) areas received $5,677 in Federal funds, per capita, 6.5 percent more than urban areas nationwide (table 1). However, Appalachia as a whole received $5,243, 0.5 percent more than the entire United States. Appalachia has a large rural population (45 percent of its population resides in nonmetro counties, compared with 20 percent nationwide), and rural Appalachia received 10.6 percent less in Federal funds per capita ($4,720) than the Nation as a whole, and 1.1 percent less than rural areas nationwide. The resulting difference in funding between urban and rural areas is larger in Appalachia (17 percent) than it is nationwide (11 percent).

Whether this differential represents a hardship for rural Appalachia depends to some extent on the type of funding received. Funding that goes mainly to individuals—such as medical, retirement, and unemployment benefits—primarily benefits the place where the funds go. However, funding that pays for infrastructure or provides employment and training may also benefit those who commute from surrounding areas. Thus, the concentra-

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Table 1

Per capita Federal funds by function, fiscal year 1997

Rural Appalachia received less funding, per capita, than urban Appalachia and the Nation as a whole

County type	All Federal funds	Agriculture and natural resources	Community resources	Defense and space	Human resources	Income security	National functions
				Dollars per person			
United States	5,218	59	508	645	101	3,138	767
Metro	5,333	18	549	734	98	3,089	845
Nonmetro	4,768	224	349	294	113	3,329	458
Appalachia	5,243	17	314	194	102	3,818	799
Metro	5,677	12	359	247	91	3,921	1,047
Nonmetro	4,720	22	260	130	115	3,694	499
By economic county types:							
Mining-dependent	5,358	13	197	140	147	4,209	652
Manufacturing-dependent	4,434	27	258	148	96	3,470	435
Government-dependent	4,374	44	252	106	119	3,264	588
Services-dependent	4,927	12	277	166	116	3,985	372
Nonspecialized	4,511	23	325	60	113	3,438	554
By policy county types:							
Retirement-destination	4,440	7	202	263	80	3,646	242
Federal lands	4,270	10	271	92	87	3,429	381
Commuting	4,114	30	294	54	102	3,292	373
Persistent-poverty	5,276	16	293	130	168	4,064	605

Note: Individual figures may not sum to total because of rounding.
There were only three counties in Appalachia classified as farming-dependent, so this economic type was excluded from this table; transfer payment policy type was also excluded, because of significant overlap with the poverty county type.
Source: Calculated by ERS using Federal funds data from the Bureau of the Census.

tion of some types of assistance in metro areas may benefit both rural and urban areas in the region.

Looking at per capita funding variation by function, we found that both metro and nonmetro areas in Appalachia received relatively high amounts for income security and national functions, including criminal justice, law enforcement, energy, higher education, and research. Income security—which includes medical, retirement, disability, public assistance, and unemployment benefits—is the predominant type of Federal assistance, accounting for 60 percent of Federal funds nationwide. Given the region's relatively high rates of poverty and unemployment, we expected—and found—that income security accounted for a relatively large share (73 percent) of Federal funding. Although about 6 percent more income security funds, per capita, went to metro areas than nonmetro areas, this urban funding advantage was much smaller than that observed for most other forms of assistance.

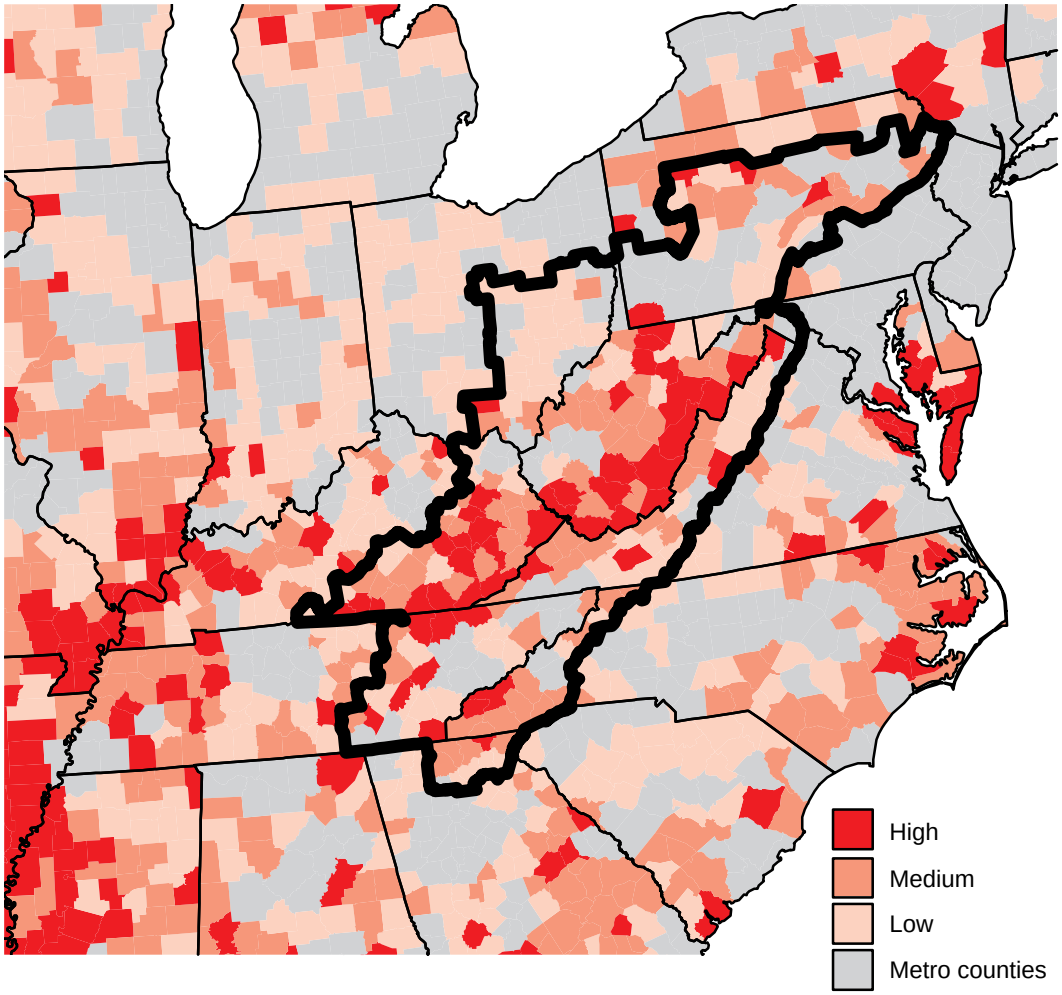
National functions accounted for a relatively large amount of funding in Appalachia, perhaps indicating superior congressional pull in placing Federal projects and installations in the region. Urban Appalachia got twice as much of these funds, per capita, as did rural Appalachia. But these facilities may provide employment and income for commuters from surrounding areas, so the urban-rural gap in benefits received may be smaller than this. Appalachia (both urban and rural) received relatively low amounts for community resources, defense and space, and agricultural and natural resources (see "Data and Definitions"). Rural Appalachia got a little more than urban Appalachia in agriculture and natural resources funding, but the amounts involved were small—$22 per capita, rural, and $12 per capita, urban. In contrast, urban Appalachia received substantially more in both community resources and defense and space funds than did rural Appalachia. Both of these categories of funding are important to local economies because they provide infrastructure and jobs. But the urban-rural funding gaps may again overstate the differences in benefits received where rural residents share from the benefits of federally subsidized urban development.

Federal Funding Varies Across County Types Within Rural Appalachia

Coal and poverty are at the core of central Appalachia; a dark streak runs through the center of West Virginia and eastern Kentucky. This area receives relatively high levels of Federal funding (fig. 1). Among the region's nonmetro counties, mining-dependent counties received the highest per capita Federal funding ($5,358) (see Cook and Mizer for an explanation of county types). Most of the funding advantage for the mining-dependent counties comes from Federal payments for income security ($4,209) and national functions ($652).

Mining counties account for only one-fifth of the nonmetro residents in Appalachia. More populous are the region's manufacturing-dependent counties, which contain 38 percent of Appalachia's nonmetro population. Most manufacturing counties are located in the South (Tennessee) and in counties along the eastern and north-

Figure 1
Per capita Federal funds, fiscal year 1997
Central part of Appalachian counties received the highest funding



Note: Outlined counties represent Appalachia as defined by Bogue and Beale. High, medium, and low correspond to the top third, middle third, and bottom third of nonmetro counties nationwide. High was $4,855 or more per person and low was $3,802 or less per person.

Source: Calculated by ERS using Federal Funds data from the Bureau of the Census.

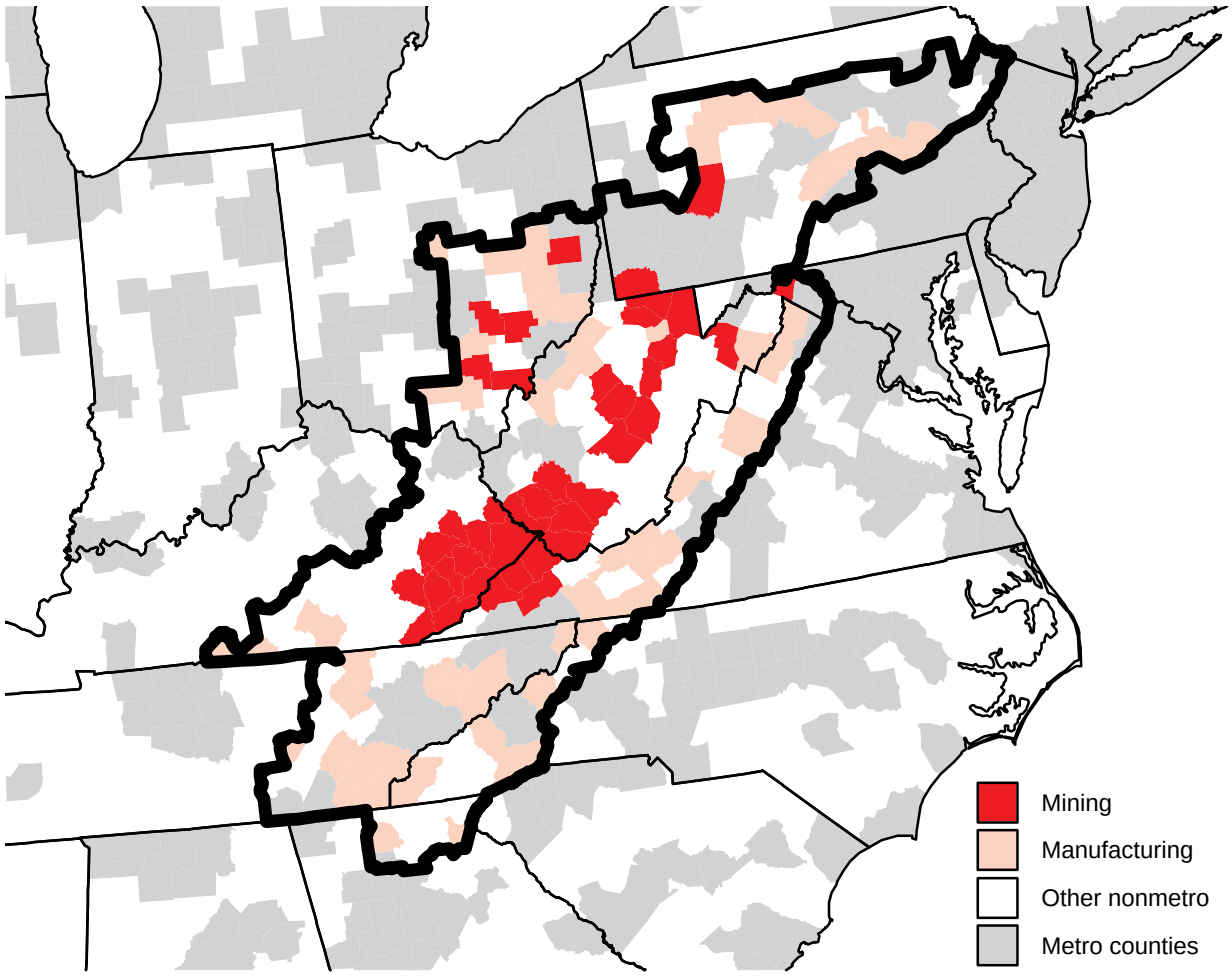
western edges of the region (fig. 2). Despite or perhaps because of their economic importance to the region, these counties get relatively low levels of Federal funds, $4,434 per capita. These places tend to have more jobs and income, probably reducing their need for income security funds, which account for most of their funding difference.

ERS's policy typology identifies nonmetro counties that are particularly affected by specific policies, including persistent-poverty, retirement-destination, commuting, and Federal lands counties. Among these policy types, persistent-poverty counties received the highest level of Federal assistance. However, they got significantly less funding than metro counties, benefiting mainly from their relatively high income security payments and, to a lesser extent, from relatively high human resources aid. Federal lands, commuting, and retirement counties—which tend to be located along the outer edges of Appalachia—received less per capita, with the lowest funding in commuting counties whose residents are likely to benefit from federally subsidized activities in nearby metro counties.

ARC and TVA: Unique Federal Institutions That Benefit Appalachia

Recognizing that Appalachia's few basic industries failed to provide the kind of economic base needed for self-sustaining growth and prosperity for its people, Congress created the Appalachian Regional Commission (ARC) in 1965 "to assist the region in meeting its special problems, to promote its economic development, and to establish a framework for joint Federal and State efforts toward providing basic facilities essential to its growth...on a coordinated and concerted regional basis." The 1965 Act (P.L.

Figure 2
Appalachian county types, 1993
Mining was predominantly in central Appalachia; manufacturing counties were located along the region's borders



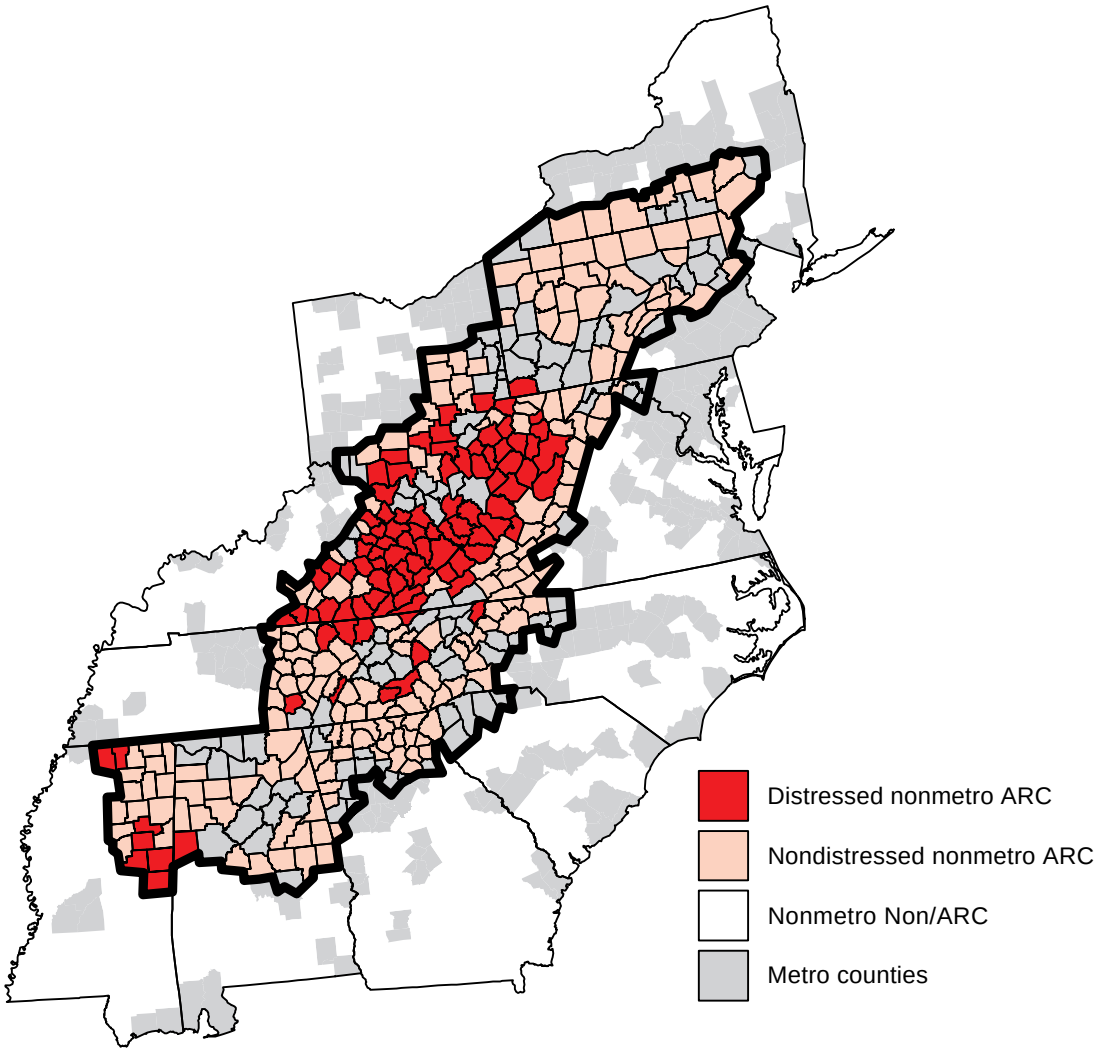
Note: See "Data and Definitions" for an explanation of county types.
Source: ERS county typologies, from *The Revised ERS County Typology: An Overview* by Cook and Mizer, 1994.

89-4) went on to require that ARC concentrate its investments "in areas where there is a significant potential for future growth and where the expected return on public dollars invested will be greatest" and envisioned that as the region's physical infrastructure, transportation, and human resources improved, a strengthened and more diversified private sector would result that would allow the region to support itself.

Compared with some other Federal agencies, ARC's Federal funding is small ($170 million in fiscal year 1998), but this understates its importance. ARC funding is relatively flexible, allowing it to be used as "first money" that leverages other investment, including other Federal assistance. ARC also funds local planning, leadership, and technical assistance. For rural areas lacking sufficient resources to effectively plan for economic development, such funding can be critical in initiating local development projects. Local planning is undertaken through ARC's Local Development Districts, which cover multicounty areas, economizing on planning costs and facilitating coordinated regional strategies. A recent evaluation concluded that ARC-assisted places significantly outperformed similar places elsewhere in the country (Isserman and Rephann).

ARC provides supplementary funds that benefit only Appalachia's most "distressed" counties— those with relatively high poverty and unemployment rates and low incomes (fig. 3). "Transitional" counties, which have less distress but still need to improve conditions, receive less ARC assistance. The remaining "attainment" and "competitive" counties receive little or no ARC assistance. Comparing figure 1 with figure 3 reveals that many distressed counties receive relatively high amounts of total Federal spending. This pattern probably owes something

Figure 3
Counties receiving assistance from the Appalachian Regional Commission (ARC)
Distressed counties receive particular assistance



Note: Distressed counties have at least 150 percent of the U.S. unemployment rate (9.3 percent), 150 percent of the U.S. poverty rate (19.7 percent), and less than 67 percent of the U.S. per capita market income ($12,074) or 200 percent poverty and one other indicator.

Source: ERS calculation using data from the Appalachian Regional Commission.

to the ARC program, as well as the fact that these places get a lot of income support payments. But despite the ARC's distress-targeted assistance, many distressed counties in the western portion of Appalachia received relatively low amounts of Federal funds in 1996. In addition, State differences are important, as some State borders (such as West Virginia's southern and eastern border) are clearly visible in the pattern of assistance (fig. 1) and they are not obviously explained by the pattern of distress (fig. 3). The reason for this is not clear, but it may reflect more aggressive representation in Congress, or perhaps more aggressive State economic development policy in applying for Federal grants in West Virginia.

ARC's boundaries encompass a substantially larger area than what is conventionally known as Appalachia, including portions of Mississippi, Alabama, and South Carolina in the South and parts of New York and Pennsylvania in the North. ARC funding, broken out by State and assistance type, is shown in table 2. Highway projects entail the largest amount of funding, reflecting the high cost of highway construction in mountainous areas and ARC's emphasis on the highway system as critical to the region's economic development strategy. The most recent ARC initiative, however, assists local entrepreneurs in forming home-grown businesses.

Another Federal institution unique to the region is the Tennessee Valley Authority (TVA). The TVA was created during the Great Depression to develop a part of Appalachia covering the Tennessee River Valley, including significant portions of Tennessee, Mississippi, Alabama,

and Kentucky, as well as some fringe parts of Georgia, North Carolina, and Virginia. But where ARC has focused on highways and related development, TVA has focused on the waterways, including electric power, flood control, environmental protection, and amenity development.

TVA's 1998 budget of $6.4 billion is substantially larger than ARC's, but most of this money comes from, and is spent on, TVA's electric power operations. TVA's Federal funds appropriation was only $70 million in 1998. This money covers the nonpower programs, including water and land stewardship ($60 million), the Environmental Research Center ($3 million) for cleanup efforts, and the Land Between the Lakes National Recreation Area ($7 million). However, appropriations legislation for 1999 reduced Federal funds for the nonpower programs to $50 million; hence, funding will have to come from other sources to maintain program levels.

Although TVA's importance to the region has been significant in many respects, it has received mixed reviews over the years (Webber; Freshwater et al.). The Tennessee River Valley portion of Appalachia appears less economically distressed than the parts of Appalachia that border to its north, and it appears to require less Federal funds (figs. 1 and 2). Whether this is a result of TVA's activities or other factors, such as a more favorable climate, is unclear.

Federal Policy Trends Affecting Appalachia

Several policy developments might be expected to significantly affect the region. Among these are the trends toward increasingly stringent environmental regulations, electric and telecommunications deregulation, welfare reform, increased highway aid, and increased pressure to cut back on the growth of domestic assistance programs.

More stringent environmental regulations proposed for air and water present challenges and opportunities for the region. Much of the region's population and industry reside near rivers and lakes that must be kept clean, but this sometimes comes at a high cost and could be a burden for some of the region's industries and communities. More stringent requirements for air pollution might pose additional problems for some places. Recent increases in environmental spending help, but it is unclear whether they can be maintained long enough to meet local fiscal demands. On the plus side, a cleaner environment might help many Appalachian communities maintain the natural amenities that attract so many tourists and residents to the area.

The proposed electric deregulation might reduce the extent to which the region benefits from its hydroelectric power sources. Deregulation is expected to create more uniform rates nationwide; hence, higher rates might be expected in those parts of Appalachia where rates are now low. For example, with the recent reduction in Federal funding for TVA's nonpower programs, if those programs are to continue they may have to be funded in part through increased TVA electric rates, and TVA's power facilities might also be privatized, resulting in reduced Federal funding in the region.

Major regulatory changes have already begun in telecommunications, which may significantly benefit the region by expanding services to further reduce isolation in Appalachia. The universal service provisions of the Telecommunications Act of 1996 may be particularly beneficial to rural areas in the region by subsidizing telecommunications in high-cost areas, especially for schools, libraries, and health-care facilities. However, it is unclear

Table 2

ARC funding, by State and funding type, fiscal year 1996

The ARC budget emphasized highways, though funding varied from State to State

State	Final fiscal year 1996 allocations					
	Highway funds	Area development	Distressed counties	Regional initiatives	Local development districts	Totals[1]
	Thousand dollars					
Alabama	9,543	2,816	951	396	413	14,119
Georgia	5,446	2,071	0	317	338	8,172
Kentucky	12,281	2,841	4,321	398	507	20,348
Maryland	2,586	1,361	0	244	110	4,301
Mississippi	2,784	1,801	1,261	289	240	6,375
New York	4,757	2,071	0	317	243	7,388
North Carolina	9,213	2,332	237	345	366	12,493
Ohio	7,693	2,222	1,277	333	253	11,778
Pennsylvania	17,775	4,058	458	526	516	23,333
South Carolina	1,283	2,100	0	320	158	3,861
Tennessee	16,236	2,973	843	412	363	20,827
Virginia	4,078	1,880	671	298	325	7,252
West Virginia	13,725	2,904	3,451	405	568	21,053
Total	107,400	31,430	13,470	4,600	4,400	161,300[1]

[1]Excludes $8.7 million for functions covering regional projects, administration, and technical support.

Source: Calculated by ERS using data from Appalachian Regional Commission.

Data and Definitions

Data. The Department of Commerce, Bureau of the Census, Governments Division produces Consolidated Federal Funds Reports data each year. These data, obtained from various Federal departments and agencies, reflect Federal obligations for expenditures and loans. The data for fiscal year 1997 covered 1,256 programs. (Census population estimates for calendar year 1997 were used to compute per capita amounts.)

Our analysis used the data from 816 of these programs, accounting for $1.4 trillion, or about 88 percent of the total Federal funds reported by Census. We excluded programs for which 25 percent or more of their funding nationally went to State capitals because such levels suggested pass-through funding that State governments later redistributed to local areas. We also excluded programs that reported much or all of their funding only at the State or national level because the funding cannot be traced to the county level. As a result, most of the large block grant programs involved with social services, employment, and training were excluded. This understates the amount of funding received, particularly for our "human resources" function.

Interpretations should be made with caution. In some cases, as with Medicaid, the data are based not on actual outlays that go to places, but on estimates based on other information. In other cases, like procurement, expenditures may be reported only at the location of prime contractors or primary subcontractors and ignore further subcontracting. In addition, some Federal agencies make payments to entities that provide services to multicounty areas, but the payments may be reported only to the headquarters of the multicounty entity. These data limitations may lead to an overstatement or understatement of benefits to some metro and nonmetro areas. For example, defense procurement, which we found primarily benefits metro areas and government-dependent nonmetro areas, probably involves subcontracting that disperses the benefits more broadly to some other nonmetro areas.

Definitions. In table 1, we used ERS's six broad function categories for Federal programs:

* Agriculture and natural resources (agricultural assistance, agricultural research and services, forest and land management, water and recreation resources)
* Community resources (business assistance, community facilities, community and regional development, environmental protection, housing, Native American programs, and transportation)
* Defense and space (aeronautics and space, defense contracts, defense payroll and administration)
* Human resources (elementary/secondary education, food and nutrition, health services, social services, training/employment)
* Income security (medical and hospital benefits, public assistance and unemployment compensation, retirement and disability—includes Social Security)
* National functions (criminal justice and law enforcement, energy, higher education and research, all other programs excluding insurance).

For reporting by place, we used OMB's 1993 definitions of metro and nonmetro counties and ERS's revised nonmetro county typologies. The economic county types were defined as follows (all percentages are weighted annual averages):

Farming-dependent—Farming contributed 20 percent or more of total labor and proprietor income during 1987-89.

Mining-dependent—Mining contributed 15 percent or more of total labor and proprietor income during 1987-89.

Manufacturing-dependent—Manufacturing contributed 30 percent or more of total labor and proprietor income during 1987-89.

Government-dependent—Federal, State, and local government activities contributed 25 percent or more of total labor and proprietor income during 1987-89.

Services-dependent—Service activities (private and personal services, agricultural services, wholesale and retail trade, finance and insurance, real estate, transportation, and public utilities) contributed 50 percent or more of total labor and proprietor income during 1987-89.

Nonspecialized—Counties not classified as a specialized economic type during 1987-89.

The county policy types were defined as follows:

Retirement-destination—The population age 60 and older in 1990 increased by 15 percent or more during 1980-90 through inmovement of people.

Federal lands—Federally owned lands made up 30 percent or more of a county's land in 1987.

Commuting—Workers age 16 and over commuting to jobs outside their county of residence were 40 percent or more of all the county's workers in 1990.

Persistent-poverty—Persons with poverty-level income in the preceding year were 20 percent or more of total population in each of four years: 1960, 1970, 1980, and 1990.

Transfer-dependent—Income from transfer payments contributed a weighted annual average of 25 percent or more of total personal income during 1987-89.

Because only three nonmetro counties in Appalachia were defined as farming-dependent, we excluded this economic type from our presentation; we also excluded the transfer-dependent policy type to simplify the presentation, because it overlaps significantly with the poverty county type. Hence, a few counties may not have fallen into any of the types we presented, and there were overlaps among our various policy types. For more information on how the county types were defined, see Cook and Mizer.

at this time how these regulatory changes and resulting changes in services will work out.

Welfare reform significantly affects the region because of Appalachia's generally high rates of poverty and unemployment. It particularly affects distressed, high-poverty counties, where a relatively large share of the population may have to seek employment elsewhere due to the lack of local employment opportunities. Increases in Federal training and employment assistance that came with welfare reform will help with the transition, and perhaps encourage more local development if firms respond favorably to labor force improvements.

The recent increase in Federal highway spending should benefit Appalachia, since the region's development strategy is focused on improved highways. Appalachia could particularly benefit from the $2.5 billion in newly authorized funds for the Appalachian Highway System. Southern Appalachia will benefit most from the change in the State highway funding formula, which increases funding more for the more rapidly growing States in the South and West.

However, efforts to balance the Federal budget have led to reductions or slow growth of other (nonhighway) types of Federal spending. If such efforts continue, community resources programs that provide more general economic development assistance to the region—such as ARC, Economic Development Agency (EDA), and USDA's rural development programs—might play smaller roles in the region's economy. With Federal funding of TVA's nonpower programs reduced in 1999, more of these programs will have to be paid for by TVA's power budget or some responsibilities will have to be transferred to other agencies to prevent program cutbacks. If cutbacks occur, this might particularly affect metro counties and rural manufacturing and services-dependent counties that tend to rely heavily on community programs.

For Further Reading. . .

Donald J. Bogue and Calvin L. Beale, *Economic Areas of the United States*, New York: Free Press of Glencoe, Inc., 1961.

Peggy J. Cook and Karen L. Mizer, *The Revised ERS County Typology: An Overview*, RDRR- 89, USDA, ERS, Dec. 1994.

Peggy J. Cook, "Welfare Reform Legislation Poses Opportunities and Challenges for Rural America," *Rural Conditions and Trends*, Vol. 8, No. 1, Dec. 1997, pp. 38-47. Available online: http://www.econ.ag.gov/epubs/pdf/rcat/rcat81/rcat81g.pdf>.

David Freshwater, Timothy Wojan, Dayuan Hu, and Stephan Goetz, *Testing for the Effects of Federal Economic Development Agencies*, TVA Rural Studies Staff Paper 97-2, April 23, 1997.

Andrew Isserman and Terance Rephann, "The Economic Effects of the Appalachian Regional Commission: An Empirical Assessment of 26 Years of Regional Development Planning," *Journal of the American Planning Association*, Vol. 61, No. 2, Summer 1995, pp. 345-64.

Rick Reeder, "Deficit Reduction Measure Ushers in Tax Cuts Plus New Aid for Low-Income Populations in 1998," *Rural Conditions and Trends*, Vol. 9, No. 1, 1998, pp. 4-8. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat91/rcat91a.pdf>.

Rick Reeder, "Some New Initiatives Add to an Overall Stable Group of General Assistance Programs," *Rural Conditions and Trends*, Vol. 9, No. 1, 1998, pp. 9-14. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat91/rcat91b.pdf>.

Rick Reeder, Peter Stenberg, Marvin Duncan, Faqir Bagi, Robert Collender, and Daniel Milkove, "Slowly Evolving Regulatory Changes Could Significantly Affect Rural Development," *Rural Conditions and Trends*, Vol. 9, No. 1, 1998, pp. 53-58. Available online: <http://www.econ.ag.gov/epubs/pdf/rcat/rcat91/rcat91j.pdf>.

Rick Reeder, Faqir Bagi, and Samuel Calhoun, "Which Federal Programs Are Most Important for the Great Plains?" *Rural Development Perspectives*, Vol. 13, No. 1, June 1998, pp. 52-58. Available online: <http://www.econ.ag.gov/epubs/pdf/rdp/rdp298/rdp298h.pdf>.

David J. Webber, "Evaluating TVA: The Contribution of Economic, Historical, and Administrative Analysis," *Policy Studies Review*, Vol. 5, No. 4, May 1986, pp. 872-77.

Karen S. Hamrick

Nonmetro Displaced Workers Face Less Hardship Than Metro Displaced Workers

During 1993-95, 4 million workers were displaced from their jobs, of which 775,000 (19 percent) were nonmetro workers. Although the displacement rate was similar for nonmetro and metro workers, nonmetro displaced workers were less likely to be unemployed at the survey date, found a new job faster, and had less earnings loss on the new job than did metro displaced workers. The nonmetro displaced worker was likely to be male, have at most a high school diploma, and be working as an operator, fabricator, or laborer.

During 1993-95, over 4 million workers lost their jobs due to economic restructuring. Economic restructuring—such as that from import competition, technological advances, or firm restructuring and downsizing—can cause economic dislocation as workers lose their jobs. Displacement occurs even though the economy is expanding. Workers may experience hardship in the form of joblessness or lower earnings when a new job is found.

This article examines the displaced worker experience during 1993-95 for metro and nonmetro areas using data from the Bureau of Labor Statistics survey on displaced workers. Are nonmetro workers displaced more or less often than metro workers? Is the hardship for nonmetro displaced workers greater or less than for metro displaced workers?

What Is Displacement?

Displaced workers "...are individuals with established work histories who have lost their jobs through no fault of their own and who are likely to encounter considerable difficulty finding comparable employment" (Browne). Displacement is considered structural unemployment, not unemployment due to economic cycles or due to the normal matching process between workers and employers.

The Bureau of Labor Statistics, in its 1996 Displaced Worker Survey, defines displaced workers as being 20 years or older who lost or left jobs because their plant or company closed or moved, there was insufficient work, or their position or shift was abolished. This last reason for displacement—position or shift abolished—includes mass layoffs. In addition, only those with 3 or more years of tenure with their employer are analyzed here. This restriction is to exclude short-tenured workers whose job loss may be due only to a poor match between employer and worker. It also ensures that those included have an established work history and an attachment to their industry sector and their occupation and thus have developed industry- and employer-specific skills that make it costly for them to take another job.

I also restrict analysis to workers under age 65, because workers 65 or older would be eligible for full Social Security benefits, softening the hardship from displacement. Consequently, displaced workers under age 65 are more of a concern from a policy standpoint.

Three Federal programs are available to assist displaced workers, and one Federal program is available to assist employers. The Worker Adjustment and Retraining Notification Act (WARN) requires employers to provide notice 60 days before covered plant closings and covered mass layoffs. The Economic Dislocation and Worker Adjustment Assistance Act (EDWAA) provides retraining and readjustment services to displaced workers and needs-related payments to those who have exhausted their unemployment insurance benefits. Both of these programs are 1988 amendments to Title III of the Job Training Partnership Act. The North American Free Trade Agreement Transitional Adjustment Assistance Program

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(NAFTA-TAA) is similar to EDWAA and was established as part of NAFTA in 1993. The Trade Adjustment Assistance Program of the Trade Act of 1974 provides technical assistance to firms facing import competition. The technical assistance includes diagnosing the firm's problems, assessing opportunities, and developing a recovery strategy.

Nationally, job displacement in the 1980's was primarily in the goods-producing industries (Hipple). By the mid-1990's, a broader range of industries were affected, and over half of displacement came from the service-producing industries. A broader range of occupations were represented as well, with an increased risk of displacement for white-collar workers.

In the early to mid-1980's, disproportionately more displaced workers were from rural areas than from urban areas (Swaim). In addition, rural displaced workers experienced more hardship from losing their jobs than did urban displaced workers. Because rural areas lagged urban by several economic indicators during the 1980's—lower employment growth, higher unemployment rates, and slower growing incomes and earnings—it follows that those rural workers who were displaced would have greater difficulty finding a new job and maintaining their old earnings level.

The general economic situation in the early 1990's was much improved for rural areas over that of the 1980's. After the recession of 1990-91, rural areas showed strong economic performance and outperformed metro areas by several measures in the recovery years of 1991-94. In particular, nonmetro employment growth was strong and unemployment was low. In 1995, nonmetro employment growth continued but at a lower rate. Given this favorable economic environment, nonmetro displaced workers would not be expected to face disproportionate hardship.

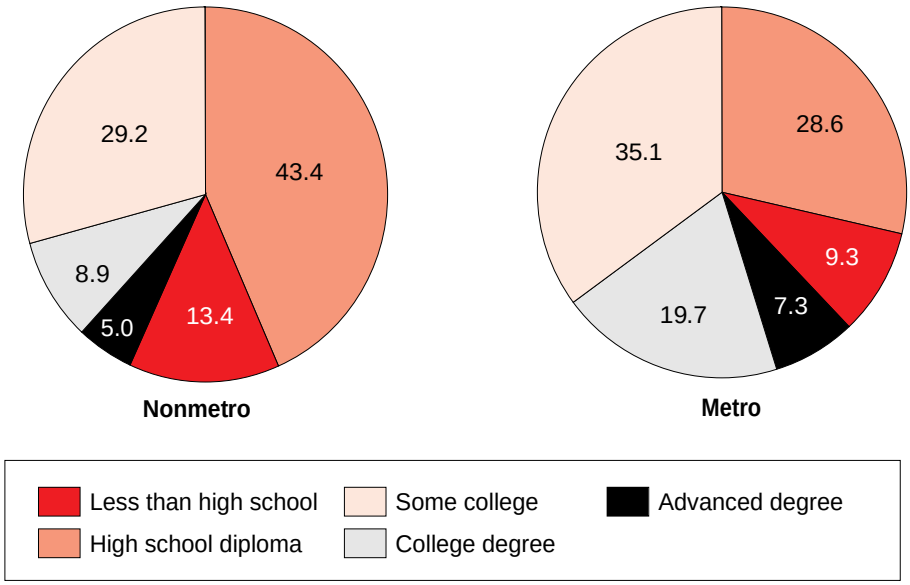
Nonmetro Displaced Face Less Hardship Than Metro Displaced

Of the 4 million displaced workers during 1993-95, 775,000 were nonmetro workers (19 percent) (table 1). This number is proportional to the nonmetro share of the labor force. For the most part, the nonmetro displaced experience over 1993-95 is about the same as the metro experience. However, there are some notable differences.

The nonmetro displaced were, on average, older than the metro displaced, and had longer tenures on their lost job. The nonmetro displaced had lower educational levels than the metro displaced (fig. 1). Over half, about 57 percent, of the nonmetro displaced had at most a high school diploma, versus 38 percent of the metro displaced. This high share of displacement is not surprising, however, for it corresponds to the share of the nonmetro labor force that has at most a high school diploma.

A larger share of the nonmetro displaced than the metro displaced moved following displacement, 20 percent versus 13 percent. Of those who moved, about 60 percent of the nonmetro displaced did so to look for work or to take a different job, whereas only 50 percent of the metro displaced who moved did so for a new job.

Figure 1
Highest level of education of displaced workers, 1993-95
Over half of nonmetro displaced had at most a high school diploma



Source: ERS estimates from Displaced Worker Survey supplement from February 1996 Current Population Survey, BLS.

Table 1

Displaced workers, 1993-95

Nonmetro workers displaced in 1993-95 were less likely to be unemployed at 1996 survey date

Item	Nonmetro	Metro
	Thousands	
Displaced workers	775	3,256
	Percent	
Men	56.7	56.7
Nonwhite	6.8	14.5
	Years	
Age	41.7	40.9
	Percent	
Age distribution:		
20-24 years	4.4	3.5
25-34 years	27.5	25.9
35-44 years	27.9	33.8
45-54 years	23.5	25.9
55-64 years	16.7	11.0
Education level:		
Less than high school diploma	13.4	9.3
High school diploma	43.4	28.6
Some college	29.2	35.1
College degree	8.9	19.7
Advanced degree	5.0	7.3
Why displaced?		
Plant or company closed or moved	46.7	43.0
Insufficient work	24.8	24.1
Position or shift abolished	28.5	32.8
Usually worked full-time on lost job	88.1	90.3
Received written advance notice of job loss	40.9	43.9
Received unemployment insurance benefits	49.9	52.4
Exhausted eligibility for unemployment insurance benefits	45.0	44.0
Moved to a different city or county since lost job	20.0	13.3
Of those who moved, move was to look for work or take a different job	59.3	49.9
	Years	
Tenure on lost job	10.2	8.9
	Percent	
Tenure distribution:		
3 up to 5 years	27.7	35.9
5 up to 10 years	33.9	33.0
10 up to 20 years	23.8	20.4
20+ years	14.6	10.7
Currently unemployed	8.0	14.0
Currently employed	76.5	74.7
Currently not in labor force	15.5	11.3

Source: ERS estimates from Displaced Worker Survey supplement from February 1996 Current Population Survey, BLS.

The nonmetro displaced were much less likely to be unemployed than the metro displaced at the time of the survey. The unemployment rate among the displaced was only 8 percent for nonmetro workers, and 14 percent for metro. In comparison, the overall unemployment rate for 1996 was 5.5 percent for nonmetro areas and 5.4 percent for metro areas.

Although the nonmetro displaced were less likely to be unemployed at the survey date, they were equally likely to be employed. About three-quarters of both the nonmetro and metro displaced were employed when surveyed. The remainder of the displaced—those neither employed nor unemployed—were not in the labor force at the time of the survey. Consequently, 15.5 percent of the nonmetro displaced had dropped out of the labor force by 1996, versus 11 percent of the metro displaced. For both nonmetro and metro displaced, about one-quarter of those who had dropped out of the labor force retired, about 6 percent were out for a disability, and about 70 percent were out for other reasons.

The nonmetro displaced found a new job, on average, 2 weeks earlier than the metro displaced (table 2). The nonmetro displaced were more likely than the metro displaced to have a jobless spell of less than 6 months,

Table 2

Displaced workers, 1993-95: those employed at survey date

Nonmetro displaced workers found jobs sooner than metro displaced workers

Item	Nonmetro	Metro
	Weeks	
After job loss, average time before working again	11.9	14.4
	Percent	
Jobless duration:		
0 up to 3 months	65.8	63.0
3 up to 6 months	17.8	15.0
6 up to12 months	8.5	12.7
12 up to 24 months	7.5	8.1
24+ months	.3	1.3
Percentage whose current job is in a different industry than lost job	59.5	62.0
Percentage whose current job is in a different occupation than lost job	65.4	61.5
	1996 dollars	
Median weekly earnings on lost job	378.23	546.33
Median weekly earnings on current job	350.00	440.00
	Percent	
Ratio median current job earnings to median lost job earnings	92.5	80.5
Share of workers who found a new job but at lower real weekly earnings	63.2	65.2

Note: The Personal Consumption Expenditure Price Index, Bureau of Economic Analysis, was used to adjust weekly earnings.
Source: ERS estimates from Displaced Worker Survey supplement from February 1996 Current Population Survey, BLS.

whereas the metro displaced were more likely to be jobless for 6 months or more (22 percent versus 16 percent). Roughly the same share of nonmetro and metro displaced changed industries or occupations to find a new job.

Although median weekly earnings were greater for the metro displaced both in the lost job and the current job when surveyed, the nonmetro displaced did much better in maintaining their earnings level. The median nonmetro current job earnings were 92 percent of the median lost job earnings, whereas the replacement ratio for metro workers was only 80 percent. About two-thirds of both the metro and nonmetro displaced found new jobs, but at lower real earnings than their lost jobs.

Nonmetro Workers Displaced at Same Rate as Metro Workers

Nonmetro workers were displaced at essentially the same rate (5.5 percent) as metro workers over 1993-95 (table 3). The displacement rate is the number of displaced workers in a group of employed workers in the same group, age 20-64, with 3 or more years of tenure with their employer.

Although rates of displacement were generally the same for nonmetro workers as for metro workers, several notable differences appear. Nonmetro workers who were younger than 35 or older than 55 had higher displacement rates than nonmetro workers age 35-54, and also higher rates than metro workers in those same age groups.

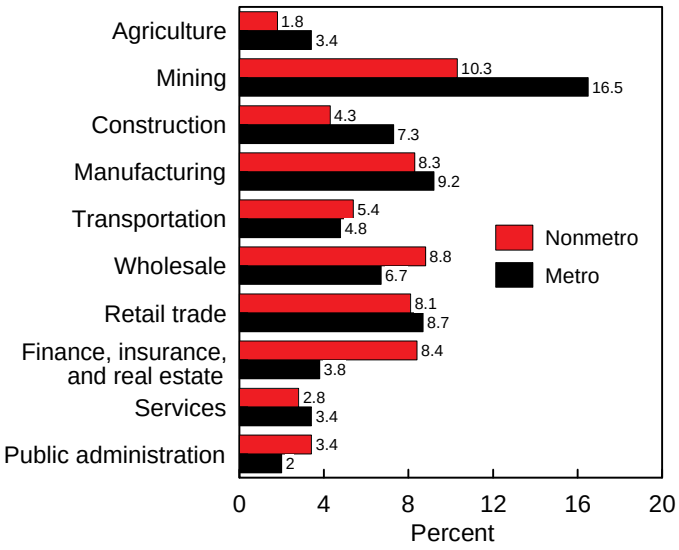
Among industries, mining and manufacturing both had high displacement rates—10.3 percent and 8.3 percent, respectively—among the nonmetro rates, but both of these were lower than the corresponding metro rates, 16.5 percent and 9.2 percent (fig. 2). For the other two goods-producing industries, agriculture and construction, the nonmetro rates were roughly half the metro rates.

For the service-producing industries, the nonmetro rates were about the same as for metro areas, except for wholesale trade—8.8 percent for nonmetro versus 6.7 percent metro; finance, insurance, and real estate—8.4 percent versus 3.8 percent; and public administration—3.4 percent versus 2.0 percent. The largest share of public

Figure 2

Displacement rates by industry, 1993-95

In wholesale trade and finance, insurance, and real estate, nonmetro displacement rates were higher than metro



Source: ERS estimates from Displaced Worker Survey supplement from February 1996 Current Population Survey, BLS.

Table 3

Displacement rates, 1993-95

Nonmetro workers were equally likely to be displaced as metro workers

Item	Nonmetro rate	Metro rate	Nonmetro rate/metro rate
	Percent		*Ratio*
Total	5.5	5.6	0.99
Age distribution:			
20-24 years	6.3	5.2	1.22
25-34 years	7.0	6.2	1.13
35-44 years	4.8	5.6	.85
45-54 years	4.7	5.4	.88
55-64 years	6.1	4.8	1.28
Men	5.6	5.7	.97
Women	5.4	5.4	1.01
White	5.6	5.6	1.00
Nonwhite	4.2	5.1	.82
Education level:			
Less than high school	6.4	6.0	1.07
High school diploma	5.7	5.2	1.11
Some college	5.9	6.9	.86
College degree	3.8	5.4	.71
Advanced degree	4.3	3.5	1.21
Industry:			
Agriculture	1.8	3.4	.53
Mining	10.3	16.5	.62
Construction	4.3	7.3	.58
Manufacturing	8.3	9.2	.90
Transportation, communications, utilities	5.4	4.8	1.13
Wholesale trade	8.8	6.7	1.30
Retail trade	8.1	8.7	.93
Finance, insurance, and real estate	8.4	3.8	2.24
Services	2.8	3.4	.82
Public administration	3.4	2.0	1.71
Occupation:			
Executive, administrative, and managerial	6.2	5.5	1.13
Professional specialty	3.1	3.8	.82
Technicians and related support	5.1	5.6	.91
Marketing and sales	7.3	6.1	1.20
Administrative support, including clerical	5.1	6.5	.78
Service	2.7	3.3	.81
Operators, fabricators, and laborers	9.4	7.4	1.27
Agriculture, forestry, fishing, and related	1.7	2.3	.73

Source: ERS estimates from Displaced Worker Survey supplement from February 1996 Current Population Survey, BLS.

administration displaced workers (from government jobs) in nonmetro areas was from local government, whereas the largest share for metro areas was from Federal Government.

By occupation, the highest rate of displacement for both nonmetro and metro areas was for operators, fabricators, and laborers—9.4 percent for nonmetro, 7.4 percent for metro. This occupational group is associated with the goods-producing industries and manufacturing in particular.

Nonmetro Areas Have Benefited From the Economic Expansion of the 1990's

Nonmetro workers are not being displaced disproportionately, nor are they at greater risk of displacement than metro workers. This is a reversal of the 1980's, when nonmetro workers were found to be at greater risk of displacement.

In addition, nonmetro displaced workers appear to be facing less hardship than metro displaced workers. The nonmetro displaced had a lower unemployment rate, fewer weeks of joblessness, and less earnings loss than the metro displaced. This situation is again a reversal of the 1980's, when the nonmetro displaced had longer periods of joblessness and greater wage loss than the metro displaced.

Nevertheless, nonmetro displaced median earnings on the current job were only 80 percent of metro median earnings. In addition, the lower educational levels and older average age of the nonmetro displaced may be a cause for concern in that nonmetro displaced workers may be at a disadvantage in seeking higher-paying jobs.

Data and Methodology

Data used are from the 1996 Displaced Worker Survey (DWS) supplement of the Current Population Survey (CPS). The CPS is a monthly survey of about 47,000 households, which is conducted by the Bureau of the Census for the U.S. Department of Labor, Bureau of Labor Statistics (BLS). BLS releases the data. The 1996 DWS was conducted in February 1996, and all respondents were asked, "During the last 3 calendar years, that is, January 1993 through December 1995, did (you / name) lose or leave a job because a plant or company closed or moved, (your / his / her) position or shift was abolished, insufficient work, or another similar reason?" If yes, the respondent was asked a series of questions concerning the job lost and subsequent labor market experience. These questions on displacement are in addition to the demographic and labor force data in the basic monthly CPS.

Displaced workers are workers 20 or older who have lost or left jobs because their plant or company closed or moved, there was insufficient work, or their position or shift was abolished. Workers on temporary layoff, quits, or firings for cause are not considered displaced. Only workers with 3 or more years of tenure at the lost job, and who are under age 65 are included in the analysis here. Workers displaced from both full-time and part-time jobs are included.

Nonmetro displaced workers cannot be accurately identified in the DWS. Metro / nonmetro status at the time of the interview was recorded, but not previous residence for those who moved in the previous 3 years. Most displaced workers—80 percent of nonmetro and 87 percent of metro—did not move. I analyzed the nonmovers and the results (not presented here) were essentially the same as those presented in table 1. Thus, because the results for all displaced and for nonmover displaced are very similar, the results presented would be essentially the same as if metro / nonmetro status over the previous 3 years was available in the data.

Metro areas are defined by the Office of Management and Budget (OMB) as core counties containing a city of 50,000 or more people or an urbanized population or at least 50,000 with a total area population of at least 100,000. Additional contiguous counties are included in the Metropolitan Statistical Area if they are economically and socially integrated with the core county. *Nonmetro* areas are counties outside metro area boundaries. After each decennial census, OMB re-evaluates the metro / nonmetro status of each county. In 1993, OMB issued a metro / nonmetro classification based on the 1990 Census. In this last reclassification, 13 counties that were metro were reclassified as nonmetro, and 111 counties that were nonmetro were reclassified as metro, resulting in a net 98 counties newly metro. Also after each decennial census, BLS redesigns the CPS sample to reflect the population. The new CPS sample and the new OMB metro / nonmetro classification were phased into the CPS during April 1994-June 1995. Because of this phasing in, getting consistent CPS metro / nonmetro figures for 1994-95 is not possible from the publicly available CPS data.

Displacement rates are usually calculated by dividing the number of displaced workers in a specified worker group by a tenure-adjusted (that is, 3 or more years of tenure with their employer) average over the displacement period (1993-95) of the number of employed workers in the specified worker group. Because of the reclassification of metro / nonmetro in 1993 and the phase-in of the new classification over 1994-95 into the CPS, a meaningful denominator cannot be estimated for 1993-95. Consequently, I used a tenure-adjusted estimate of each worker group from the February 1996 basic CPS. Because 1993-96 was a period of employment growth, using 1996 data may make the denominators larger and the displacement rates smaller than if a 1993-95 average could be calculated. Seasonal factors may make the denominators smaller and the dispacement rates larger.

Information on the Federal programs assisting displaced (dislocated) workers and their employers is available on the Internet. For more information on the Job Training Partnership Act, see Department of Labor's website, *www.dol.gov* /, and look under Programs / Services. For more information on NAFTA Trade Adjustment Assistance, see the DOL site under Employment and Training Administration. For more information on the Trade Adjustment Assistance Program, see Department of Commerce's website, *www.doc.gov*, and look under Economic Development Administration.

For Further Reading. . .

Lynn E. Browne, "Structural Change and Dislocated Workers," *New England Economic Review*, Federal Reserve Bank of Boston, Jan. / Feb. 1985, pp. 15-30.

Henry S. Farber, "The Changing Face of Job Loss in the United States, 1981-95," *Brookings Papers on Economic Activity: Microeconomics 1997*, Washington, DC: Brookings Institution, 1997, pp. 55-128.

Steven Hipple, "Worker Displacement in an Expanding Economy," *Monthly Labor Review*, Vol. 120, No. 12, Dec. 1997, pp. 26-39.

Lori G. Kletzer, "Job Displacement," *The Journal of Economic Perspectives*, Vol. 12, No. 1, Winter 1998, pp. 115-136.

Paul Swaim, "Rural Displaced Workers Fare Poorly," *Rural Development Perspectives*, Vol. 6, No. 3, June-Sept. 1990, pp. 8-13.

Robert N. Collender, Patrick J. Sullivan, Daniel L. Milkove, and Faqir S. Bagi

Financial Markets Serve Rural Areas Reasonably Well

Rural financial markets differ from urban markets, but they appear to work reasonably well at supplying credit to rural borrowers. When urban and rural loans are compared, average interest rates, collateral requirements, and other terms are nearly identical. Furthermore, national opinion surveys have generally found that rural borrowers are at least as satisfied with their financial service provider as are urban borrowers. The nature of rural economies—small communities, small borrowers, and undiversified industries—can lead to disparities in the availability of financial services among individual borrowers and communities, but financial market imperfections have not detracted substantially from overall rural growth.

The cost and availability of credit for agriculture and other rural borrowers is a perennial concern of policymakers. Not only is the availability of financial services at competitive prices important for economic growth and development, but economic problems are often blamed on a lack of credit even when limited business prospects, poor managerial skills, or high risk of failure are the underlying causes of the problem. A perception that more money is a solution to perceived problems, together with the low initial budgetary impact of many credit initiatives, combine to fuel interest in Federal credit policy.

As part of its deliberations on the 1996 farm legislation, Congress asked USDA to study rural credit markets to determine how well public and private lenders were serving farmers and rural household and development finance needs, and whether additional sources of credit were needed. This article summarizes the Department's response, as published in *Credit in Rural America.*

Rural Financial Markets Differ From Urban but Generally Perform as Well

Data on commercial banks, the Farm Credit System, Federal financial assistance programs, and a range of other rural lenders—together with information on rural and urban loans and borrowers—show that, on average, rural financial markets work fairly well. Rural financial markets differ from urban markets because of the nature of rural communities. Like rural America in general, rural financial markets are diverse. Sporadic problems exist for some borrowers in some markets, risk financing (such as equity for new businesses and long-term operating loans for businesses and community organizations) is difficult to find, and many rural communities lack competitive banking markets. While undoubtedly important to those affected, overall these problems appear to be minor compared with the other limitations many rural areas face in sustaining growth and are not enough to prevent economic development in most areas.

From a policy perspective, available evidence indicates that "broad-brush" Federal intervention in rural financial markets is not needed and, in most cases, would not be cost-effective. That is, broad attempts to increase the flow of loanable funds to rural areas are unlikely to solve existing problems. Instead, if cost-effective solutions to rural financial market failures exist, they are likely to target specific submarkets (such as equity finance), specific communities (such as those in poor, isolated areas), or specific types of borrowers.

Rural borrowers are served by a wide variety of financial service providers. The most visible sources are regulated financial institutions—particularly commercial banks, savings and loans (for housing), and the Farm Credit System (for agriculture). However, other institutions and individuals play important roles by supplying credit or by

The authors are all members of the Rural Business and Development Policy Branch, Food and Rural Economics Division, ERS. This article is based on *Credit in Rural America,* AER-749, April 1997, which benefited from contributions by a large number of USDA staff.

enhancing the competitiveness of rural financial markets. Table 1 lists the potential sources of credit and financial market support for agriculture and rural housing, business, and development. Retail lenders are responsible for originating loans; the degree of competition among them can determine how efficiently borrowers are served.

Government-supported secondary markets and credit enhancement programs were initiated partly to help foster greater competition for eligible loans. They encourage the creation of new competitors, or increase the size of the market served by existing lenders and increase the lending capacity of financial institutions within a given market. Borrowers do not typically interact directly with the institutions and entities listed in the lower half of table 1. These organizations typically deal with retail lenders, buying eligible loans, serving as conduits or guarantors for the sale of mortgage-backed securities, providing cash advances, and guaranteeing or insuring eligible loans originated by lenders. Nonetheless, their existence has had a marked impact on retail lender behavior and, to varying degrees, on financial market performance.

Three critical issues are: (1) whether rural financial institutions have an ample supply of funds available to finance local economic development, (2) whether rural borrowers pay more for credit than do urban borrowers, and (3) whether rural financial markets satisfy viable demand for credit. For private lenders, our underlying concern is whether financial markets are economically efficient. An efficient financial market offers borrowers equal opportunities by allocating credit to its most profitable uses. But even this equality of opportunity may not yield a socially equitable allocation of resources. For example, the uneven distribution of education and wealth within the U.S. population creates an uneven distribution of creditworthiness that may be politically unacceptable. Concerns over fair treatment of underserved populations

Table 1

Sources of credit for agriculture and rural housing, business, and development

Credit sources vary depending on the nature of the loan

	Type of loan			
Type of lender	Agriculture	Housing	Small business	Community development
Retail lenders:				
Regulated financial institutions—				
Commercial banks	major	major	major	major
Farm Credit System	major	minor	minor	minor
Thrift institutions	minor	major	minor	minor
Insurance and pension funds	moderate	—	minor	—
Unregulated lenders—				
Finance companies	moderate	minor	moderate	—
Mortgage brokers	minor	major	—	—
Trade credit suppliers	moderate	—	moderate	—
Nonprofits (revolving loan funds, etc.)	—	minor	minor	minor
Individuals	moderate	moderate	moderate	moderate
Government direct loan programs—				
U.S. Department of Agriculture	moderate	minor	—	minor
Other Federal agencies	—	minor	minor	—
State and local agencies	minor	minor	minor	major
Secondary markets and credit enhancements:				
Government-sponsored enterprises—				
Federal National Mortgage Association	—	major	—	—
Federal Home Loan Mortgage Corporation	—	major	—	—
Federal Home Loan Bank System	—	major	—	minor
Federal Agricultural Mortgage Corporation	minor	minor	minor*	minor*
Farm Credit System (lending to Other Financial Institutions—OFI's)	minor	—	—	—
Government agencies—				
U.S. Department of Agriculture	moderate	minor	minor	moderate
Other Federal agencies	minor	moderate	moderate	minor
State and local agencies	minor	minor	minor	minor
Private sector—				
Loan poolers	minor*	minor	minor*	minor*
Loan guarantors/insurers	minor	moderate	minor	minor

Note: Precise estimates of the relative importance of specific lenders within rural credit markets are generally unavailable. Categorizations are based on survey data, administrative records, and anecdotal evidence. A major participant provides or supports more than 20 percent of the market; moderate participants handle 5 to 20 percent of the market; minor participants handle less than 5 percent of the market. * = support is provided primarily for federally guaranteed loans. — = not applicable or no significant activity.

Source: ERS calculations based on industry data.

underpin many Federal credit assistance programs. As a result, financial market efficiency often is not the goal (or is only one of several goals) of public programs, but from a rural economic development perspective, reasonably efficient financial markets remain a key to sustainability.

Rural Lenders Have Ample Loanable Funds

The most prominent rural lenders are commercial banks, the Farm Credit System (FCS), savings and loan associations, and Federal credit programs administered by USDA and by other Federal agencies. The commercial banking system is the largest supplier of credit services to rural businesses and development organizations and serves the widest range of borrowers and loan types. Rural banks provide home mortgages, consumer loans, agricultural loans, and commercial/industrial loans. They also hold tax-exempt securities used to finance State and local government activities. As the dominant lender in many markets, rural banks are well positioned to provide the commercial credit needed to finance rural development. Commercial bank capital levels are high, as are profits, while problem loans are low (fig. 1). The banking system as a whole, and rural-headquartered banks in particular, are well positioned to meet the credit needs of rural America as we approach the end of the decade. And while loan/deposit ratios are at historically high levels, surveys indicate that rural bankers are anxious to make loans to creditworthy borrowers. Furthermore, rural banks have an increasing array of nondeposit sources of loanable funds, including:

- Emergency, adjustment, and seasonal lending from Federal Reserve Banks
- Advances from Federal Home Loan Banks and the Farm Credit System
- Securitization of eligible loans through Fannie Mae, Freddie Mac, and Farmer Mac
- The market for Federal funds and repurchase agreements
- Correspondent banks, bankers' banks, and private placement of securitized loans.

These nondeposit sources of funds allow commercial banks to pursue profitable loans with less regard to their core deposits by providing relatively easy access to national money markets.

Other depository institutions, such as savings and loan associations and credit unions, typically serve a much narrower market than commercial banks, but these institutions, too, are well situated to meet the credit needs of their clientele. Savings and loans (S&L's) are a major source of home mortgage credit, and credit unions provide consumer credit to their members. Like commercial banks, S&L's rely heavily on secondary markets to move the loans they originate and service off their books, providing them with a ready source of funds with which to make additional loans. In markets served by S&L's, these institutions act as strong competitors with commercial banks and other mortgage lenders, providing homeowners with a ready supply of mortgage credit. Credit unions rely on low operating outlays to hold down the cost of their loans. Nonetheless, their small size and membership restrictions keep them from being a major source of credit in most rural communities.

The Farm Credit System (FCS), through its nationwide network of banks and associations, serves as a major source of agricultural credit and a strong competitor for creditworthy farmers. The FCS provides long- and short-term credit for commercially viable farmers, farm cooperatives, farm-related businesses, fisheries, rural housing, rural utilities, and agricultural exports. Based on its status as a government-sponsored enterprise (GSE) and on the sound financial shape of its component banks and associations, the FCS has access to a ready supply of competitively priced loanable funds for eligible borrowers. Unlike other GSE's, the FCS originates and services the vast majority of the loans it holds, putting it in direct competition with other retail lenders. For activities that the System's largely autonomous institutions are authorized to finance, competitively priced credit should be available to qualifying borrowers.

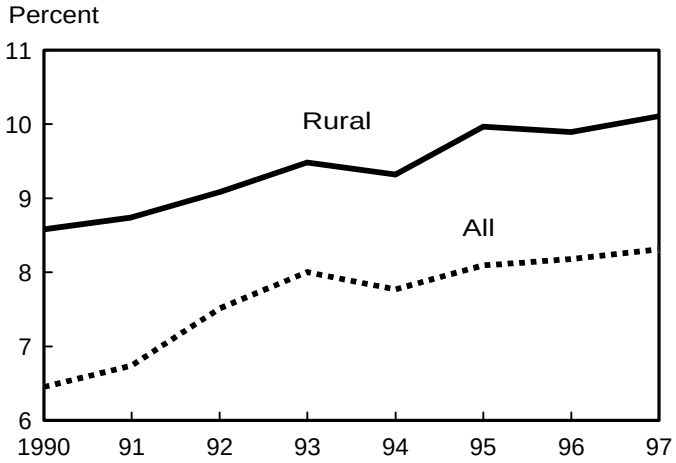
As a group, the major suppliers of commercial credit in rural areas—commercial banks, S&L's, and FCS lenders—are financially strong and able to respond to increases in economic demand. These institutions have increased their lending in recent years and have the ability to meet future demand for commercial credit.

Government Programs Influence Credit Allocation

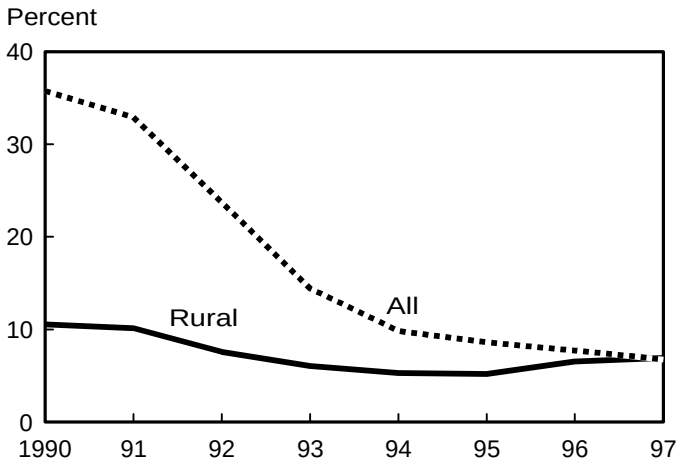
The Federal Government uses a number of approaches to influence the allocation of credit in the U.S. economy—regulation of financial institutions, tax policies, bankruptcy laws, support for secondary markets, and financial assistance programs (grants, loans, loan guarantees, and technical assistance). We have already discussed how government-sponsored enterprises—such as the FCS, Fannie Mae, Freddie Mac, the Federal Home Loan Bank System, and Farmer Mac—affect the supply of credit. This section briefly covers the wide range of Federal grant and loan programs that provide financing for agriculture and rural housing, businesses, and communities. Federal policies and programs that heighten lender competition, lower transaction costs, or improve information have enhanced financial market efficiency. However, direct lending programs operated by the public sector rarely succeed in allocating capital efficiently and often attempt to address public purposes other than improving financial market efficiency by subsidizing favored borrowers or activities. Even programs that attempt to improve rural financial market efficiency through guarantees and techni-

Figure 1
Commercial bank finances, 1990-97

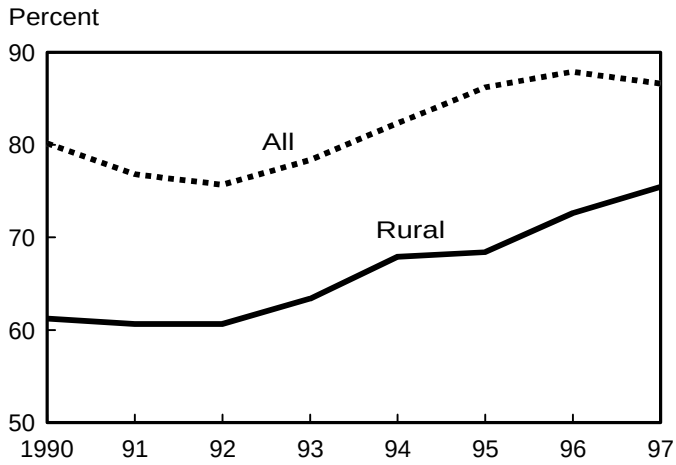
Banks' capital ratios
Equity capital as a proportion of assets resumed its upward trend at rural banks in 1997



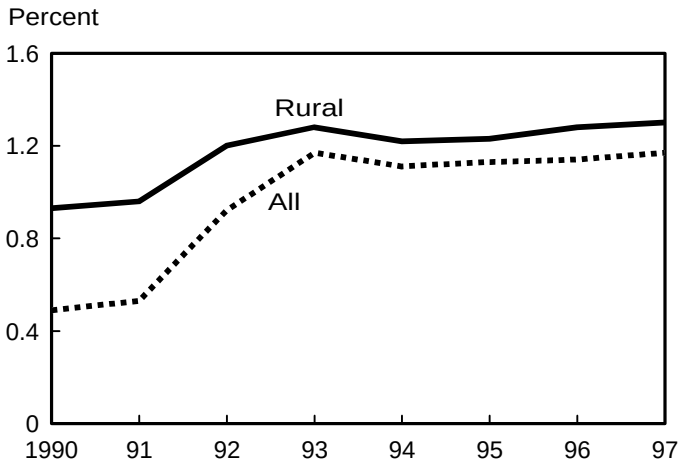
Problem loans as a share of bank capital
Bad loans at rural banks remain low relative to equity capital



Bank loan/deposit ratios
Rural bank loan ratios continued to grow during 1997



Return on bank assets
Rural bank profits reached a new record relative to assets in 1997



Source: Calculated by ERS from Federal Reserve Board, Reports of Condition and Reports of Income, December 31, 1990-97.

cal assistance often involve subsidies for favored lenders or borrowers, requiring targeted program eligibility rules.

While not credit per se, grants are an obvious substitute for credit in delivering financial resources to spur rural development. Indeed, from an economic efficiency perspective, grants are often superior to credit for dealing with fairness issues. They can provide the subsidies needed to arrive at a "fair" allocation of resources without burdening the recipient with debt repayment obligations. Grants can also help alleviate credit market inefficiencies related to high transaction costs and provide seed funds for new competitors.

Grant programs are most prevalent for public infrastructure and community development projects, but also support the provision of low-income housing and technical assistance. In fiscal year 1996, rural areas received roughly $100 per capita for infrastructure and community development—far more than for any other purpose (table 2). Of all grant funds that were allocated to the county level, rural areas received approximately $170 per capita—about 93 percent of the urban level.

Direct loans are originated and often serviced by a Federal agency. For the past two decades, the Government has been reducing its direct lending activities in favor of programs, such as loan guarantees, that

encourage greater private sector lending. However, a number of Federal agencies continue to operate direct loan programs for specific borrowers qualifying for subsidized credit, such as victims of natural disasters and limited-resource borrowers. While direct loan programs can require large administrative staffs to ensure that funds are properly targeted, they are appropriate for delivering highly subsidized credit because, like grant programs, they maximize the Government's control over allocation decisions. In fiscal year 1996, roughly $115 per capita was received by rural borrowers through direct loan programs, far more than was received by urban borrowers.

Loan guarantees and insurance now dominate Federal agency lending activities. With a loan guarantee or insurance program, the Government leaves the origination and servicing aspects to private lenders, which many believe have comparative advantages over government agencies in these activities. The guarantee/insurance lowers or completely removes the risk of default losses on loans to qualified borrowers, increasing lenders' willingness to supply them with credit. The fact that the loans are backed by the Federal Government also reduces the amount of capital that lenders are required to hold on outstanding loans and increases their liquidity. The increased liquidity resulting from Federal loan guarantees/insurance may allow participating lenders to make more loans—of all types—than they would otherwise. In 1996, rural areas received over $180 per capita in federally guaranteed/insured loans—far less than the $409 per capita received by urban communities. Housing accounted for half of the rural allocation, with the remainder going mostly to farms and other rural businesses.

In addition to financial support, various Federal agencies also provide technical assistance directly to farmers, businesses, and communities. Technical assistance helps borrowers plan and implement economically sound development projects. The USDA's extension system, the U.S. Department of Commerce's Manufacturing Extension Partnership, and the Small Business Administration's Small Business Development Centers all provide technical assistance to rural borrowers. Technical assistance is also provided by supervised credit programs administered by Federal agencies or with Federal funds.

Technical assistance is unique as a credit-enhancement technique because it fundamentally improves the quality of credit demand rather than its supply. Credit (unless it is merely a disguised income transfer) requires repayment. To qualify for commercial credit, households, businesses, and governments must demonstrate the potential to satisfactorily make loan payments on a timely basis. Through its technical assistance programs, the Federal Government improves the ability of recipients to carefully manage their household, business, or public budgets, thereby improving their qualifications for commercial loans. The supply of credit is not altered per se, but its availability to underserved populations may be.

Given the nature of Federal programs, determining whether sufficient funds are available to meet program goals is difficult, but relative to urban areas, rural areas

Table 2

Federal financial assistance program outlays for economic development, 1996

Rural areas received slightly less grant money, more direct loan funds, but far less guaranteed/insured loan funds per capita than urban areas

Purpose and location[1]	Type of assistance		
	Grants	Loans	Guarantees
	Dollars per capita		
Agriculture:			
Rural	1.65	72.89	27.40
Urban	1.22	9.25	1.77
Housing:			
Rural	66.52	24.18	95.49
Urban	109.12	9.88	358.49
Business:			
Rural	.62	5.03	41.83
Urban	.16	5.31	42.70
Community development:			
Rural	101.72	12.56	16.83
Urban	73.15	1.04	5.63
Total:			
Rural	170.51	114.66	181.55
Urban	183.65	25.48	408.59

[1]The purpose of each Federal program is based on the primary activities funded. For a listing of the types of programs included in each category, see *Credit in Rural America*. Location is determined by each county's inclusion or exclusion in a Metropolitan Statistical Area as defined by the Office of Management and Budget.

Source: Calculated by ERS from the Census Bureau's *Consolidated Federal Funds Report, 1996*.

appear to receive their fair share in most cases. While specific programs have marked geographic patterns and the form in which assistance is provided differs between urban and rural areas, the only area in which the level of assistance provided to urban borrowers far exceeds that provided to rural borrowers is in guaranteed/insured housing loans. Part of this difference reflects the way data are reported, but even so, rural borrowers and their lenders clearly rely less on Federal housing loan programs than do their urban counterparts.

Rural and Urban Interest Rates Are Similar

Measures of credit market performance rely heavily on comparisons of the cost of credit. Significantly higher average risk-adjusted effective interest rates on rural loans compared with similar urban loans would provide strong evidence of widespread rural credit market problems. However, comparing simple averages of interest rates on rural and urban loans can be misleading because interest is only part of the cost of credit and depends critically on the risk of default a particular borrower represents. The interest rate comparisons presented in the literature adjust for some of the factors that can distort such comparisons, but sufficient information simply is not available to precisely measure the risk-adjusted cost of credit in either rural or urban markets. As a result, the available evidence is somewhat inconclusive but suggests that the performance of rural and urban credit markets is comparable.

USDA's *Credit in Rural America* includes comparisons of average interest rates on rural and urban SBA section 7(a) guaranteed small business loans and home mortgages originated during 1995, controlling for as many cost-related factors as the data support. In neither case did average interest rates differ greatly. Earlier research based on the Federal Reserve Board's National Survey of Small Business Finance found rural and urban interest rates virtually identical for similar types of business loans, with few significant differences in loan terms apparent on the typical rural and urban small business loan. Analysis of a 1995 survey of the National Federation of Independent Business membership also found that rural business firms were more concerned with credit availability than they were about its cost. Rural respondents generally thought their primary financial institution was a reliable source of credit.

When interest rates on home mortgages were compared, most types of home mortgages were slightly more expensive in rural areas in 1995. However, disparities were typically small and consistent with the greater cost of doing business in sparsely populated areas. Recent data on community development financing is not readily available, but 1980's research comparing the borrowing costs of rural and urban governments found no appreciable difference in interest rates paid on tax-exempt bonds when cost-related factors, such as bond rating and issue size, were accounted for.

Given the data limitations faced by all such comparisons, rural borrowers generally appear to pay roughly the same average interest rate on loans as their urban counterparts. In those cases where evidence of higher rates exists, the disparity rarely seems to be greater than could plausibly be explained by the greater cost of doing business in sparsely populated areas. One area of continuing concern, however, is the cost and availability of risk capital. A lack of data precludes much discussion about equity financing for new businesses, but anecdotal evidence suggests that markets serving high-risk ventures may be less developed in rural areas. While equity financing is difficult to arrange for any risky venture, the informal nature of startup capital markets and the premium placed on having a pool of managerial and technical expertise available to support the entrepreneur/project director both suggest that risk capital may be easier to arrange within urban settings.

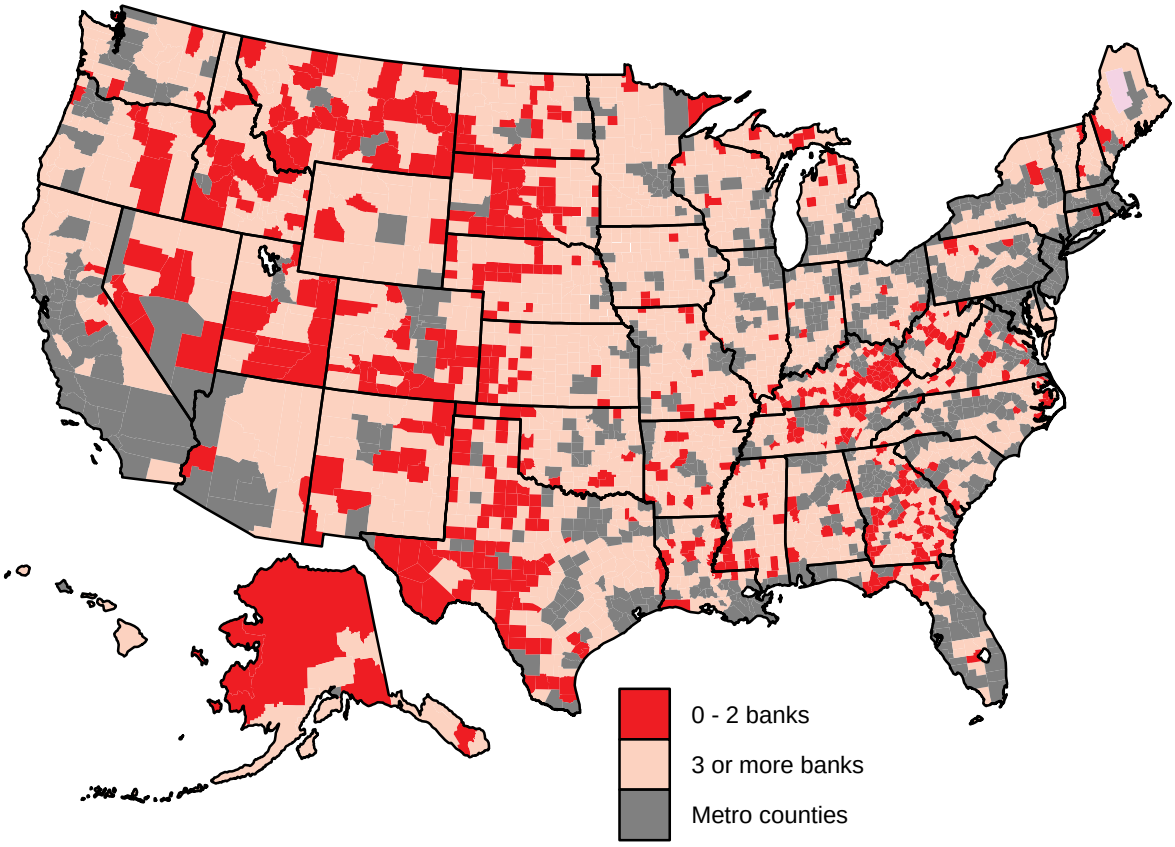
Rural Financial Market Structure Is a Continuing Concern

While rural credit is ample and interest rates are comparable to those offered in urban areas, the structure of rural financial markets is a continuing cause for concern. Rural communities typically have far fewer lenders than urban communities, and financial market segmentation further reduces competition among existing lenders. National averages can mask a considerable amount of variation in local financial market conditions; the absence of competitive pressures in some rural markets raises concerns that some rural borrowers may be at a disadvantage in acquiring credit.

Despite rapid consolidation within the banking industry nationwide, the number of competing banks within local financial markets has remained remarkably stable over the past 15 years, perhaps because of potential antitrust enforcement by the Department of Justice and bank regulator concerns over the community impacts of mergers. Still, in June 1997, 26 percent of rural counties were served by two or fewer banking firms, with all of a bank's branches and all the affiliates of a multibank holding company counted as one firm (fig. 2). In contrast, 45 percent of urban counties were served by 10 or more banking firms. Competitive financial markets are more likely to allocate loanable funds efficiently and offer credit at interest rates that reflect anticipated risk.

Financial markets are segmented by geographic location, loan riskiness, and loan terms, including size, term to maturity, collateral, and purpose. Institutional design and regulation create barriers to market entry that sustain this segmentation. The structure of Federal and State programs, GSE charters, and banking laws has encouraged

Figure 2
Rural counties served by two or fewer commercial banking firms
Sparcely populated and poor counties have few competing banks



Source: Summary of Deposits tape for June 1994, Federal Deposit Insurance Corporation.

segmentation in agricultural, housing, and business loan markets. For example, struggling and low-resource farms are served through Federal and State direct and guaranteed loan programs, part-time farmers primarily through commercial banks, and large commercial farms through the FCS and insurance companies. A similar stratification and segmentation occurs in housing and business credit markets. Various barriers and competitive advantages—including subsidies, capitalization rules, location of lending offices, and organizational structures—sustain this segmentation. Segmentation per se is not necessarily a problem if each market segment is competitive. However, in sparsely populated rural economies, financial market segmentation can support noncompetitive pricing and lending behavior, which can retard the economic development of affected groups and communities.

Financial market problems are most likely to affect borrowers in small, isolated communities who depend heavily on local lenders for their credit needs. Marginally creditworthy institutions, firms, and households—those whose loans may have trouble qualifying for secondary markets when such markets exist—and small entities needing relatively small loans are likely to rely heavily on local lenders. The more isolated their communities are from competitive banking markets, the more likely local lenders will feel free of competitive pressure. But there are limits to how inefficient credit market allocations can become, even in the most remote one-bank town. Nontraditional lenders and other financial institutions are always ready to move into market niches, particularly if the potential for above-average profits substantially outweighs the costs of market entry.

Rural Credit Markets Sound, but Localized Disparities Remain

The commercial banking system, savings and loans, and the Farm Credit System are in sound financial shape and have access to an ample supply of loanable funds to meet the commercial credit needs of qualified rural borrowers. Access to loanable funds does not appear to be a problem for rural lenders. Based on the limited data available for similar loans in urban and rural areas, the cost of credit

appears to be comparable; that is, no evidence was found that rural borrowers pay appreciably higher interest rates than urban borrowers, on average. The differences that were found were small and, in the case of conventional home mortgages, consistent with the presumed higher costs of servicing sparsely populated settings.

Nonetheless, overall averages can mask significant disparities among individual borrowers and communities. The general characteristics of retail banking markets (for example, many relatively uninformed borrowers, substantial information and transactions costs for both borrowers and lenders, a small number of lenders in many local markets, and barriers to entry by other lenders) make them vulnerable to financial market imperfections and may allow lenders in some markets to operate less efficiently than they would otherwise in competitive markets (Rhoades). In addition, most retail lenders are not major sources of credit for all borrowers, and they often specialize in providing particular types of loans or serving particular risk classes of borrowers within the markets they serve. The resulting segmentation of credit markets along product, geographic, and borrower characteristic lines further reduces competition among lenders. Such market conditions may result in higher prevailing interest rates or, more troubling, fewer creditworthy loans being made. However, market forces limit the size of such impacts, since new or nontraditional lenders invariably respond to attractive market opportunities.

In sum, no evidence of widespread or economically important market failures or imperfections has been found. Concerns remain that the structure of many rural financial markets may enable inefficient or noncompetitive practices that could slow growth in rural areas. And the most efficient financial market will not address the credit needs of those who fail to qualify for commercial credit because of legitimate creditworthiness concerns. But these concerns require measured policy responses. Broad-brush Federal initiatives that attempt to increase the flow of loanable funds to rural areas will not address the types of sporadic problems that are likely to exist in rural America. In addition, credit problems by themselves are unlikely to be the only barriers to growth in stagnating economies. Policies addressing the educational and skill levels of the rural workforce, the cost of getting to markets, the availability of nonfinancial business and personal services, and government regulations are likely to have an equal or greater effect on rural development.

For Further Reading. . .

A. Berger and T. Hannan, *The Efficiency Cost of Market Power in the Banking Industry: A Test of the 'Quiet Life' and Related Hypotheses*, Finance and Economics Discussion Paper 94-36, Board of Governors of the Federal Reserve System, 1994.

S. A. Rhoades, "Competition and Bank Mergers: Directions for Analysis from Available Evidence," Office of the Comptroller of the Currency Conference on Banking and Antitrust, Nov. 1995.

R. Shaffer and G. C. Pulver, "Rural Nonfarm Businesses' Access to Debt and Equity Capital," in *Financial Market Intervention as a Rural Development Strategy*, Staff Report AGES-9070, USDA-ERS, 1990.

U.S. Department of Agriculture, Economic Research Service, *Credit in Rural America*, AER-749, Apr. 1997. Available online: <http://www.econ.ag.gov/epubs/pdf/aer749>.

Fred Gale

Tobacco Communities Facing Change

Legislation designed to combat smoking could have important consequences for the many communities where tobacco is grown and processed. Tobacco's economic role has declined in most communities. The most vulnerable communities are those where tobacco production costs are high, farms are small, and where alternative crops and nonfarm opportunities are limited. Focusing development efforts on the most vulnerable communities could help blunt the economic effects of reduced tobacco use.

Declining tobacco use could mean important adjustments for the many communities where tobacco is grown. Tobacco plays an important economic role in these communities by keeping many small farms viable, providing income to retired farmers and others who rent out their tobacco quota, and by supporting local farm supply stores, machinery dealers, warehouses, and tobacco merchants. Residents of tobacco communities are concerned about how new and more stringent antismoking measures being considered by policymakers will affect their livelihoods. Additional uncertainty has been introduced by proposals to terminate the 60-year-old Federal Tobacco Program (see "Settlement Funds Could Be Use To Help Tobacco Communities").

Tobacco is grown in nearly 500 counties of the Southern United States, primarily in Kentucky, North and South Carolina, Virginia, Tennessee, parts of Georgia, Florida, West Virginia, Maryland, southern Indiana, Pennsylvania, and Ohio (fig. 1). At last count in 1997, there were nearly 90,000 tobacco farms, and in recent years their sales of tobacco leaf amounted to $2.5 billion to $3 billion per year. Tobacco provides an important source of farm income in a region where profitable alternatives are often unavailable.

This article discusses the likely economic effects of reduced tobacco use and proposed changes in the Federal tobacco program. The article then describes tobacco-growing communities, evaluates the economic importance of tobacco in those communities, and identifies the most vulnerable areas. The final section discusses how farmers and communities may adjust to tobacco's shrinking economic role.

Fred Gale is an economist in the Rural Business and Development Policy Branch, Food and Rural Economics Division, ERS.

Reduced Consumption Could Have Important Regional Effects

Increases in cigarette excise taxes, price increases to cover industry settlement payments, increased regulation, and antismoking efforts are reducing demand for tobacco. Following a "global settlement" reached between State attorneys general and representatives of the tobacco industry in July 1997, Congress embarked on an effort to pass a comprehensive tobacco bill that eventually died in the Senate in June 1998. Four States settled individual lawsuits against the industry in 1998 and in November 1998, tobacco manufacturers reached a $206-billion settlement with the remaining 46 States. The November settlement was immediately followed by a 45-cent increase in wholesale cigarette prices. Two Federal excise tax increases are scheduled for years 2000 and 2002. A number of States are also increasing excise taxes, and additional increases in the Federal excise tax are being discussed. Additionally, regulation of tobacco by the Food and Drug Administration (FDA) is being contested in the court system.

U.S. consumers spend roughly $50 billion on tobacco products each year. Those dollars support an estimated 500,000 jobs directly, and many more in supporting industries, but only about 2 to 3 cents of each retail dollar spent on tobacco products goes to growers and their communities. The largest share of the tobacco dollar goes to manufacturing (38 cents), but wholesale, retail, and transportation (27 cents) and excise taxes (26 cents) also account for much larger shares than tobacco growing. Cigarette manufacturing workers are among the highest paid manufacturing workers, so the loss of these jobs could have significant impacts, primarily in medium-sized and smaller metro areas (Richmond, VA; Winston-Salem, NC; Louisville, KY; Macon, GA; and Concord, NC) where tobacco manufacturing and supporting activities are important components of the local economy. Wholesale,

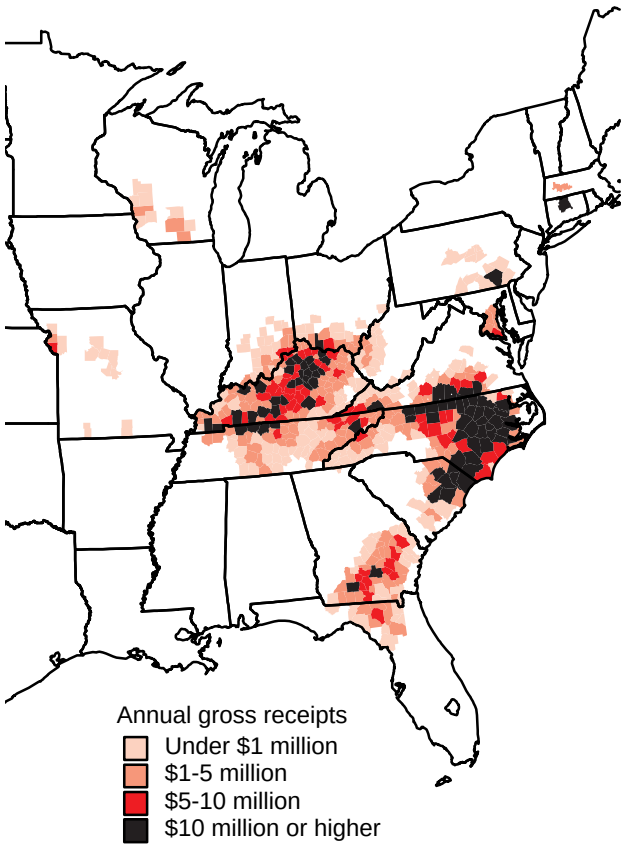
retail, and transportation jobs are spread throughout the country, mostly in urban areas. These businesses would also be affected, as tobacco is a profitable merchandise line with a high ratio of sales to square footage in retail stores. Small convenience food stores rely on tobacco products for about one-fifth of sales, while supermarkets, the largest single retail outlet for tobacco products, generate about 3 percent of their sales from tobacco products.

Nationally, reduced tobacco consumption would have little longrun net effect on the U.S. economy if reduced expenditures on tobacco products were made on other goods and services produced domestically. However, on a regional basis, tobacco-growing Southern States would lose income and employment, while other regions would gain. Areas where tobacco is grown may be the hardest hit because the land and human resources used in tobacco growing have few alternative uses that can provide income equivalent to that provided by tobacco. The anticipated decline in smoking resulting from comprehensive tobacco legislation could seriously hurt tobacco farmers and their communities by reducing the demand for tobacco leaf. Blake Brown of North Carolina State University analyzed the effects of a $1.50 increase in the per-pack tax on cigarettes. (Assessments against tobacco companies to settle lawsuits filed against them are expected to have an effect similar to an excise tax by raising cigarette prices by $1.00 to $1.50 per pack.) Brown predicts that a $1.50 excise tax would result in a long-term decline in tobacco sales of roughly 10-20 percent and a decline of over $500 million in annual farm revenues from tobacco if the current tobacco farm program is maintained. This would mean a smaller industry with fewer jobs and less income flowing to tobacco communities.

Senator Richard Lugar's 1998 proposal to end the Federal tobacco program, providing farmers with a generous buyout, has received considerable support in Congress. Ending the program would likely have even greater effects on tobacco communities than antismoking legislation. If the tobacco program is eliminated, the industry would restructure as production would concentrate in low-cost regions, resulting in fewer, larger tobacco farms. By eliminating price supports, prices would fall closer to world market levels. Brown predicts that tobacco leaf prices would fall 20-30 percent in the long run if the price support system were eliminated in conjunction with a $1.50 excise tax increase. That would make U.S. tobacco much more competitive on world markets, but it would reduce the high returns now received by U.S. growers. Currently, quotas limit the amount that each grower can sell. Elimination of tobacco quotas would mean an increase in production as growers become free to market as much leaf as they choose.

Two major types of tobacco are used in making cigarettes. Flue-cured tobacco is grown in Virginia, the Carolinas, northern Florida, and southern Georgia, while burley is

Figure 1
Estimated annual average tobacco receipts, 1994-96
Tobacco growing was concentrated in several Southern States



Source: Calculated by ERS using USDA county production estimates.

grown mostly in Kentucky and Tennessee. In Brown's scenario, production of flue-cured tobacco would increase 40-50 percent with the removal of marketing quotas, while the change in burley production is uncertain. As U.S. tobacco becomes cheaper, manufacturers would substitute domestic for imported leaf (imports now account for about 40 percent of leaf used by manufacturers). U.S. tobacco leaf exports would also grow. Consequently, the United States may actually produce more tobacco without the tobacco program, but prices and net returns would be much lower. For flue-cured tobacco, gross revenues (sales) may increase slightly, as greater volume makes up for lower prices, while for burley tobacco, revenues would likely decline 20-30 percent.

There are about 120,000 farms that grow tobacco, but there are about 300,000 owners of tobacco quotas. Without the tobacco program, owners of tobacco quotas would lose the considerable income now derived from quotas. Growers who own quota can sell their tobacco at roughly 40-50 cents per pound above the variable costs (that is, excluding land and quota costs), a much larger margin than would exist in an unregulated market. Many owners of quota do not grow tobacco but rent their quota to growers. This is an important source of income for many, including

Settlement Funds Could Be Used To Help Tobacco Communities

In 1998, Congress considered a number of proposals for comprehensive tobacco legislation that would have increased cigarette prices, placed further restrictions on advertising tobacco products, allowed the Food and Drug Administration (FDA) to regulate nicotine, imposed sanctions on manufacturers for failing to reduce youth smoking, instituted other measures to prevent smoking, and compensated State and Federal governments for smoking-related health expenditures. There were also proposals to end, privatize, or eliminate the 60-year-old Federal tobacco program, a system of marketing quotas, acreage allotments, and price supports funded by assessments on producers. Proposals to end the program included provisions to buy out tobacco quotas. Comprehensive tobacco legislation failed to pass Congress in 1998 and seems unlikely now. However, additional tobacco excise taxes, FDA regulation of tobacco, and other measures are likely to be considered in future sessions of Congress.

When Congress failed to pass comprehensive tobacco legislation, tobacco manufacturers and State attorneys general arrived at a settlement that would not require congressional approval. Under terms of the November 1998 settlement, tobacco manufacturers will pay $206 billion over a 25-year period to compensate 46 States (4 States settled individually) for Medicare costs of treating sick smokers. Tobacco manufacturers will also pay into a 12-year $5.15-billion National Tobacco Community Trust Fund. Several States are considering earmarking a share of their settlement funds for tobacco growers and their communities. Virginia plans to set aside half of settlement funds for growers, and has established a commission to gather suggestions for distribution of the money. A North Carolina plan will put half of the State's settlement funds into a nonprofit corporation to help tobacco-dependent communities, and split the remaining half between farmers and other uses. Proposals were made in other tobacco States, but none had been adopted at the time this article was written.

retired growers and their family members. Therefore, proposals for ending the tobacco program also have included provisions for a buyout of tobacco quotas that would compensate quota owners for the loss of their asset.

Removal of tobacco quotas and acreage allotments would result in important regional shifts in tobacco production and a decline in the number of growers. The allocation of tobacco quotas across counties has been fixed for decades. Sale or lease of quota across county boundaries has been prohibited (except in Tennessee), thus preventing regional shifts and farm consolidation as comparative advantage has changed over the past several decades. In many counties, quotas are a valuable asset, but in some counties, quotas go unused. With deregulation, production would become more concentrated on fewer, larger farms in low-cost producing regions. Brown anticipates that flue-cured production would decline in the Piedmont of North Carolina and Virginia, but expand in the coastal plain of the Carolinas, southern Georgia, and northern Florida. Burley production would decline in high-cost Appalachian counties and expand in central Kentucky and Tennessee, although the North Carolina-Virginia Piedmont could gain some of that burley production. Areas outside the current tobacco-growing region in other parts of the South could begin producing tobacco if quotas are eliminated. Small operations, many of which consist of only a few acres, would no longer be viable with lower returns per acre. Producers who continue growing tobacco will seek to expand acreage to make up for lower per-acre returns and to spread the costs of mechanized equipment over more units of output. Without the current tobacco program, many producers and knowledgeable observers anticipate a tobacco industry where fewer, larger producers produce on contract for tobacco manufacturers.

Economic Importance of Tobacco

Tobacco has an important historical role in many Southern communities, but it has been overtaken by nonfarm industry as the economic base in most local economies has expanded and grown. Income from tobacco farming has been stagnant for many years. Annual gross receipts from tobacco have fluctuated between $2 billion and $3 billion since the mid-1970's. After adjusting for inflation, tobacco receipts fell during the mid-1970's and early 1980's, but have changed little since the late 1980's (fig. 2). Trends in farm earnings for the tobacco-growing region reflect trends in tobacco sales. Over the same period, total personal income in tobacco-growing counties has more than doubled in real terms. Clearly, tobacco's share of the economy in these areas has declined considerably over the past two decades.

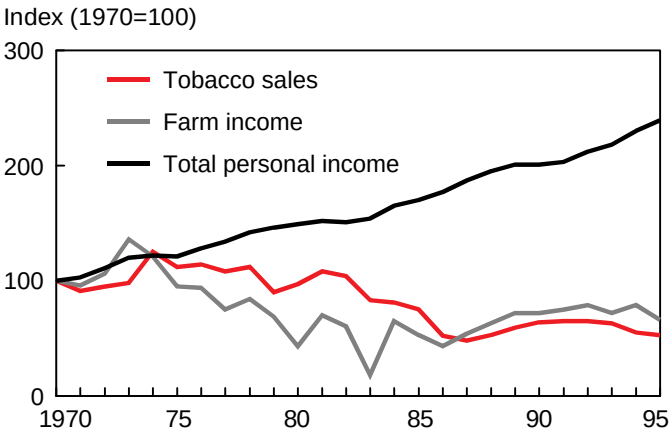
The share of income from all farming in tobacco counties fell steadily from about 5 percent in the early 1970's to less than 2 percent in the 1980's, where it has stayed until today. Based on 1993-95 data, only 27 tobacco counties would be classified as farm-dependent (farm earnings are 20 percent or more of total earnings). Earnings from all types of farming are less than 5 percent of total earnings in most tobacco counties. Since tobacco is only a fraction of farm income in these counties, even fewer counties would be considered "tobacco-dependent" if we could measure earnings from tobacco. Among farm-dependent tobacco counties, 1 (Robertson, KY) derives 70 percent of farm sales from tobacco, 4 derive 25-35 percent, and the remaining 22 counties draw less than 20 percent from tobacco.

In most tobacco counties, tobacco accounts for less than half of farm sales. Overall, the 1992 Census of Agriculture indicates that about 20 percent of farm sales in tobacco counties (including non-farm-dependent) are derived from tobacco sales. Tobacco's share of farm receipts exceeds 70 percent in a number of counties along the

Figure 2

Tobacco sales and income for tobacco counties, 1970-95

Tobacco and farming in general have declined in economic importance in the tobacco-growing region



Source: Calculated by ERS using data from USDA/NASS and Bureau of Economic Analysis for 491 counties with tobacco income.

North Carolina-Virginia border and in eastern Kentucky. Tobacco's share of farm earnings or net income is higher than its share of gross receipts, since tobacco is much more profitable than other crops and livestock. Nevertheless, these numbers indicate that few counties are highly dependent on tobacco income.

Some communities are more vulnerable than others to portentous changes in the tobacco industry. Mountainous and piedmont areas—where farms are small, farm expansion is difficult, profitable alternatives to tobacco are unavailable, and production costs are high—will likely lose tobacco farms, especially if the tobacco program is eliminated. These areas also have the fewest alternative economic opportunities and tend to rely the most on tobacco income. Low-cost producing areas, where expansion of acreage to take advantage of mechanized equipment is possible, are likely to see increased tobacco acreage and production if the tobacco program is eliminated, although per-acre returns would be much lower. In these areas, expanded tobacco production would largely take the place of other crops and the effect on overall income and employment would be uncertain. Many tobacco-growing communities are located near growing urban and suburban areas. In these areas, tobacco is a relatively small part of the economy and tobacco land has high value for residential and commercial development. Nonfarm employment and business opportunities are also abundant in these areas.

Counties in or adjacent to small metro areas (with population under 1 million) account for nearly three-fourths of estimated tobacco receipts (fig. 3). These metro areas are attached to medium-sized cities, such as Richmond-Petersburg, VA; Raleigh-Durham, NC; Winston-Salem, NC; Lexington and Louisville, KY; and Knoxville, TN. Nonfarm growth in these areas has generally been healthy in recent years. A number of smaller cities—such as Danville, VA; Rocky Mount, Greenville, and Goldsboro, NC; Florence, SC; and Hopkinsville, KY—lie in the heart of tobacco-growing areas. A large number of tobacco counties (153) are not adjacent to any metro area, but they account for only about one-fifth of tobacco receipts. Thirty-one tobacco counties, accounting for 4.7 percent of tobacco receipts, lie in or adjacent to large metro areas, including Cincinnati, Washington, DC, and Kansas City.

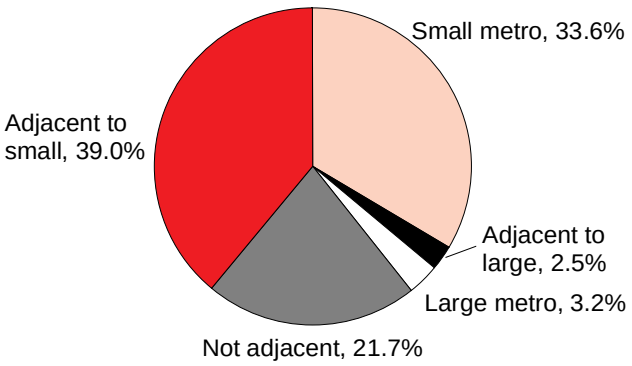
The Most Dependent Counties Are Most Vulnerable to Loss of Tobacco Dollars

It is difficult to measure the local economic importance of tobacco. There are no statistics that count the number of people employed in tobacco farming. Tobacco is a seasonal part-time enterprise for most farms that grow it. Most tobacco farms are too small to fully support a family without off-farm income. According to the 1997 Census of Agriculture, 65 percent of tobacco farms have gross sales under $20,000 per year. In most tobacco-farming families, tobacco dollars are an important supplement to other family income derived from a combination of off-farm work, other farm enterprises, and retirement income. Fifty-six percent of tobacco farmers work off farm, and 38 percent work full-time off-farm (at least 200 days per year). About one-fourth are at least 65 years old. The number of hired workers employed on tobacco farms is particularly difficult to estimate. Temporary workers (often migrants), family members, or local teenagers are hired for planting, cultivation, and harvest. Tobacco farms are the largest users of the Department of Labor's H-2A visa program that provides immigrant guestworkers for agriculture.

Figure 3

Share of tobacco receipts by county type, 1995

Most tobacco is grown in or near small metro areas with population under 1 million



Note: Small metro = metro area population under 1 million.
Source: Calculated by ERS using data from USDA/NASS and ERS urban influence codes.

Measuring Tobacco's Economic Importance

One way to characterize the importance of tobacco is by the ratio of gross tobacco sales to total personal income. Estimates of net tobacco income by county are unavailable, but gross income or sales of tobacco can be estimated from USDA's annual county-level production estimates. Gross sales overstate the amount of income received by farmers because a portion of those receipts must be used to pay expenses. Many of the physical inputs purchased with these expenditures (fertilizer, chemicals, fuel, vehicles, and machinery) are manufactured outside the tobacco-growing region, and consequently these expenditures have little economic impact locally, except for the margin earned by local equipment and farm supply dealers. However, inspection of cost-of-production budgets indicates that these are a relatively minor portion of total expenditures. An important share of the expenditures made by farmers stay within the local economy: payments to local hired labor, repair shops, warehouse fees, interest paid to local banks, and rental payments to owners of land or quota. While gross receipts overstate the income received by farmers, they may be the best estimate of the amount of tobacco income circulating within a local economy.

The total county income measure used here is Total Local Personal Income by place of work (TLPI). TLPI measures income actually earned in the county. It excludes transfer payments and dividends, interest, and rent, as well as income earned by residents who commute to jobs outside the county. Note that this ratio will usually be higher than the ratio of tobacco receipts to total personal income, which includes income earned at a job outside the county of residence (commuting to a job in another county), transfer payments, dividends, and rent.

Figure 4 shows one measure of tobacco's importance: the ratio of tobacco gross receipts to total county personal income (see "Measuring Tobacco's Economic Importance"). Over half of tobacco counties (263) have a tobacco-to-personal income ratio of less than 1 percent. Another 139 counties have ratios between 1 and 5 percent, 56 have ratios of 5-10 percent, and 33 counties have a ratio exceeding 10 percent. These ratios indicate that tobacco accounts for a small share of the economy in most tobacco-growing counties.

Most tobacco farms are in counties with low to moderate (tobacco income ratios of 1-9 percent) tobacco dependence. In 1992, the most dependent counties (ratios above 10 percent) contained only 21,000 of the 123,000 tobacco farms and accounted for only about 12 percent of tobacco receipts.

The biggest tobacco-growing areas are not the most reliant on tobacco income. Only a few of the leading tobacco counties in the coastal plain of the Carolinas and southern Virginia have high tobacco-income ratios. Of the 33 counties with tobacco-income ratios exceeding 10 percent, 26 are in Kentucky, and most had tobacco receipts under $10 million. Four counties with ratios over 10 percent are in North Carolina, while Virginia, Tennessee, and Indiana each have one. The degree of tobacco dependence appears to be determined by the extent of nonfarm opportunities available rather than the level of tobacco production.

Counties with the highest tobacco dependence have relatively few economic alternatives. Tobacco accounts for over half of farm receipts in the most tobacco-dependent counties, compared with only 13.6 percent in the least dependent counties (table 1). While the local economy as a whole may not be highly dependent on tobacco even in counties with the highest tobacco-income ratios, farmers themselves are highly dependent on tobacco in those counties.

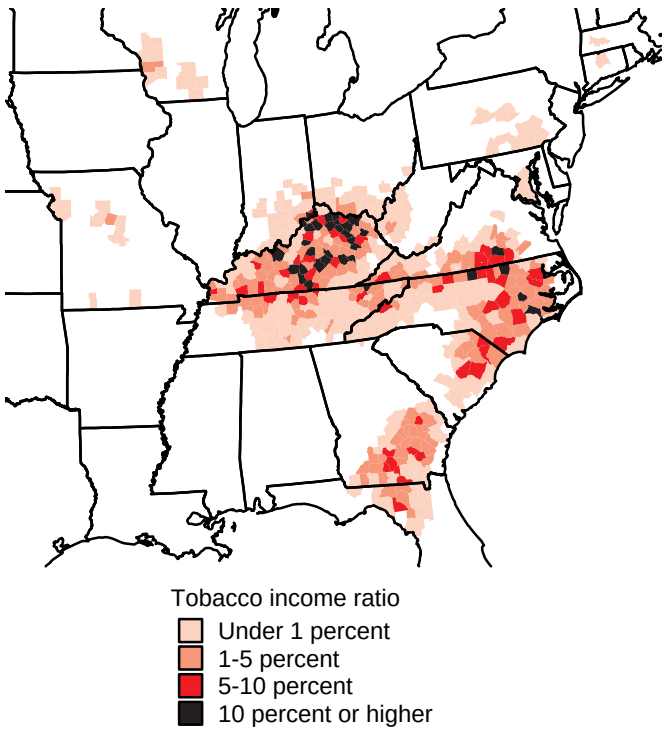
Data from the 1990 Census of Population give further indications about the extent of economic opportunities available in various tobacco counties (table 1). In counties with tobacco-income ratios exceeding 10 percent, nearly half of employed residents commuted to jobs outside the county in 1990. The percentage of commuters is less than 25 percent in counties with a tobacco-income ratio under 1 percent. The high incidence of commuting out of the county suggests that relatively few jobs are available in counties with the highest tobacco dependence.

The relatively high percentage of persons receiving Social Security income (32.4 percent) in the most tobacco-dependent counties indicates a relatively old population.

Figure 4

Ratio of tobacco receipts to personal income, 1995

Counties with the greatest tobacco dependence are primarily in Kentucky



Source: Calculated by ERS using USDA county production estimates.

Table 1

Economic characteristics of tobacco counties by degree of tobacco dependence

The relatively few counties with high dependence on tobacco have weaker prospects for developing nontobacco alternatives

Characteristics	Tobacco-personal income ratio (percent)			
	Less than 1	1-4	5-9	10 or over
		Number		
Counties	263	139	52	33
		Thousand		
Tobacco farms, 1992	26.8	48.9	23.5	20.7
		Percent		
Share of tobacco receipts, 1994-96	16.6	45.6	26.0	11.8
Tobacco as share of farm receipts, 1992	13.6	28.4	40.4	53.2
Residents commute to job outside county, 1990	24.3	28.0	40.0	47.3
Residents received Social Security income, 1990	25.9	29.4	30.9	32.4
Residents received public assistance, 1990	7.0	10.5	11.5	13.7
High school graduates, 1990	71.6	61.6	57.8	52.3
Unemployment rate, 1994-96	4.5	6.4	6.0	6.2
Employment growth, 1991-96	11.2	10.1	9.8	9.5
Income share by sector, 1995:				
Farming	.9	4.5	8.1	8.8
Mining	.6	.5	.1	.2
Construction	6.0	5.8	6.5	7.3
Manufacturing	23.8	28.4	31.9	26.9
Transportation, communication, and public utilities	6.2	4.9	4.1	5.3
Wholesale trade	5.5	4.0	3.6	2.8
Retail trade	10.2	10.9	10.0	11.0
Finance, insurance, real estate	5.1	3.1	2.6	3.4
Services	23.5	16.9	14.5	17.2
Government	16.9	18.6	16.6	25.8

Source: Compiled by ERS from 1990 Census of Population, 1992 Census of Agriculture, USDA/NASS, Bureau of Labor Statistics, and Bureau of Economic Analysis.

The percentage of residents receiving public assistance (13.7 percent) in the most dependent counties is nearly twice the percentage in the least dependent counties (7 percent). Unemployment is lowest and employment grew fastest in the least tobacco-dependent counties. Job growth has exceeded 9 percent even in the most tobacco-dependent counties, but a number of counties have lost jobs. The much lower percentage of high school graduates in the most dependent counties suggests that residents may have relatively few skills to prepare them for nonfarm jobs.

Economic conditions vary considerably across the tobacco-growing region. From 1994 to 1996, the national unemployment rate was generally 4-6 percent. Most tobacco counties had unemployment rates in this range or lower, including 145 counties with rates at 4 percent or lower. Unemployment is low in the growing urbanized areas of Raleigh / Durham / Chapel Hill and Greensboro / Winston-Salem / High Point, NC; Lexington, KY; Nashville and Knoxville, TN. Approximately 70 percent of tobacco farms are located in counties where unemployment rates are 6 percent or lower.

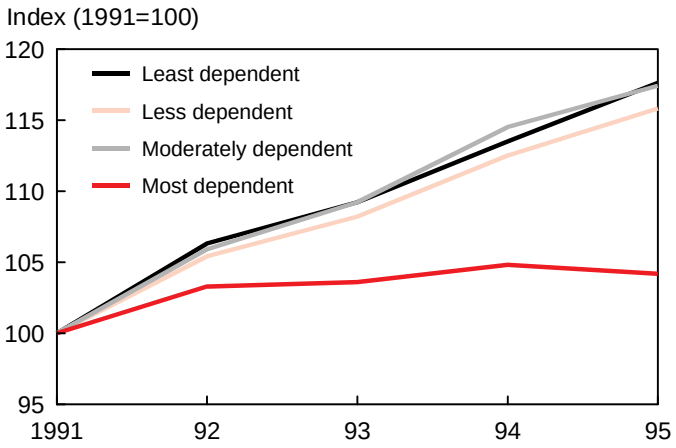
The tobacco-growing region has 142 counties with relatively high unemployment rates of 7 percent or more, including 43 counties with unemployment exceeding 10 percent. Unemployment remains high in eastern Kentucky and adjoining regions, and in many Appalachian counties, most notably in southwest Virginia, southside Virginia, northeastern and southeastern North Carolina, much of northeastern South Carolina, and parts of Georgia and Tennessee. These economically distressed regions are the most vulnerable to declining tobacco production since they offer fewer alternatives to tobacco. Relatively few farms are located in these counties. Based on the 1992 Census of Agriculture, about 24,000 (of 120,000) tobacco farms are in counties with unemployment of 7-10 percent, and only 11,000 are in counties with unemployment above 10 percent.

Finally, the relatively weak economic performance of the most tobacco-dependent counties is illustrated in figure 5. Real personal income in counties with tobacco-income ratios less than 10 percent grew at the healthy rate of 15-20 percent during 1991-95. However, real personal income in counties with tobacco-income ratios of 10 percent or higher grew very little after 1992. Weak growth in these most dependent counties means that adjustments to

Figure 5

County personal income growth by degree of tobacco dependence, 1991-95

The most tobacco-dependent counties had slow income growth



Note: Total local personal income, adjusted for inflation. Tobacco dependence based on ratio of gross tobacco receipts to personal income.

Source: Calculated by ERS using data from Bureau of Economic Analysis.

loss of tobacco income will be particularly difficult in those regions.

Preparing for Adjustments

Farmers and their communities will need assistance as they face a future where they may no longer be able to count on tobacco for their livelihood. Significant funds will be made available for assistance in several tobacco States as a result of the 1998 settlement between States and tobacco manufacturers (see "Settlement Funds Could Be Used To Help Tobacco Communities"). Farmers want to ensure that they, along with meaningful community input, govern decisionmaking about how such funds would be used. They envision that community development funds would be used primarily for agricultural development, although they recognize that some funds could be used for nonagricultural business development in communities with no viable agricultural alternatives to tobacco.

Farmers and extension workers have been searching for alternative crops for years with little success. The tendency now is to speak of supplements, rather than alternatives, because no crop or other enterprise can provide the high returns to so many farmers as tobacco does. Researchers are also seeking new uses for the tobacco plant. The search for alternative enterprises (such as aquaculture, organic vegetables, greenhouse crops, and equine development) has intensified as the future of tobacco has become increasingly uncertain. The focus has been on high-value crops and value-added activities that can provide high returns per acre. Most traditional row crops and livestock enterprises have low returns per acre that are not viable on tobacco farms, which often have only a few acres. Direct marketing and farm-based recreation—including pick-your-own, fee-based fishing and hunting, golf driving ranges, and other activities—may be a good option for tobacco farms on the fringes of fast-growing metropolitan areas.

Community development funds would be used for research and education on tobacco alternatives, technical assistance, loans and grants for new enterprise development, as well as nonagricultural business development. One of the most pressing needs that tobacco farmers anticipate is capital for new enterprises. While studies have generally found no shortage of capital for rural business development, farmers believe that rural bankers are generally unwilling to lend money for new, unfamiliar enterprises that they feel are too risky. Therefore, tobacco farmers believe that loans and grants for new enterprise development should be a key component of tobacco community development funds.

For poorer and more rural communities, development funds might be used effectively to upgrade local infrastructure: transportation, water and sewer infrastructure, and police and fire protection. For some communities, improving their attractiveness as business locations could help community development become more sustainable and longlasting. However, tobacco growers are wary of allowing funds to be used in this manner because they may be diverted to projects that will bring little or no benefit to farmers. Legislative proposals have also included funds for worker retraining programs and scholarships for tobacco workers and their family members at universities and technical colleges. Most tobacco farmers are at or near retirement age, so retraining for another job may not be feasible for them. Training the children of farmers may benefit individuals, but may have limited benefits for rural community development. When rural residents obtain more education, they tend to migrate to cities because rural communities have fewer jobs requiring higher education.

Conclusion

Changes in tobacco policy will have important economic impacts that will be concentrated on a relatively few geographic areas of the South. However, the Southern economy has been adjusting to a decline in tobacco for decades. Individuals will face painful adjustments to a restructured or deregulated tobacco industry, but most tobacco-growing areas are well-positioned to absorb the loss of tobacco income, because most tobacco is produced in or near growing urban areas. A closer look reveals that some counties are more vulnerable than others. Counties with the heaviest reliance on tobacco income are creating the

fewest economic opportunities. Farmers are looking for technical and financial assistance in identifying and implementing new farm enterprises to supplement or replace tobacco.

For Further Reading. . .

A. Blake Brown, "Tobacco Reports" (collection of reports on tobacco policy and outlook), <http://www.cals.ncsu.edu/ag_rec/faculty/brown/tobaccopubs.html>, 1998.

Fred Gale, "Tobacco Dollars and Jobs," *Tobacco Situation and Outlook*, TBS-239, USDA/ERS, Sept. 1997, pp. 37-43. http://www.econ.ag.gov/briefing/tobacco/Dollarsa.htm.

Institute for Environmental Negotiation, University of Virginia, "Southern Tobacco Communities Project" (an innovative effort to establish dialogue and build coalitions between public health professionals and tobacco communities), <http://www.virginia.edu/~envneg/tobacco/>, 1998.

Richmond Times Dispatch, "Tobacco: Up in Smoke?" (archive of tobacco-related articles), <http://www.gatewayva.com/rtd/special/tobacco/>, 1998.

Rural Advancement Foundation International, "Tobacco Communities Project" (nonprofit effort to form teams to find ways to supplement tobacco income and sustain communities), <http://www.rafiusa.org/sustainable/tobacco/index.html>, 1998.

Kenneth E. Warner, George A. Fulton, Peter Nicolas, and Donald R. Grimes, "Employment Implications of Declining Tobacco Product Sales for the Regional Economies of the United States," *Journal of the American Medical Association*, Vol. 275, No. 16 (April 24, 1996), pp. 1241-46.

U.S. Department of Agriculture, Economic Research Service, "Tobacco" (listing of reports and statistics on tobacco), <http://www.econ.ag.gov/prodsrvs/rept-sag.htm#tobacco>, 1998.

U.S. General Accounting Office, *Tobacco: Issues Surrounding a National Tobacco Settlement*, GAO/RCED-98-110, <http://www.gao.gov/AIndexFY98/abstracts/rc98110.htm>, April 1998.

U.S. Senate, Committee on Agriculture, Nutrition, and Forestry, "Hearing to Examine the Implications of the Proposed Tobacco Settlement," <http://www.senate.gov/~agriculture/hea918.htm>, Sept. 18, 1997.

Penni Korb

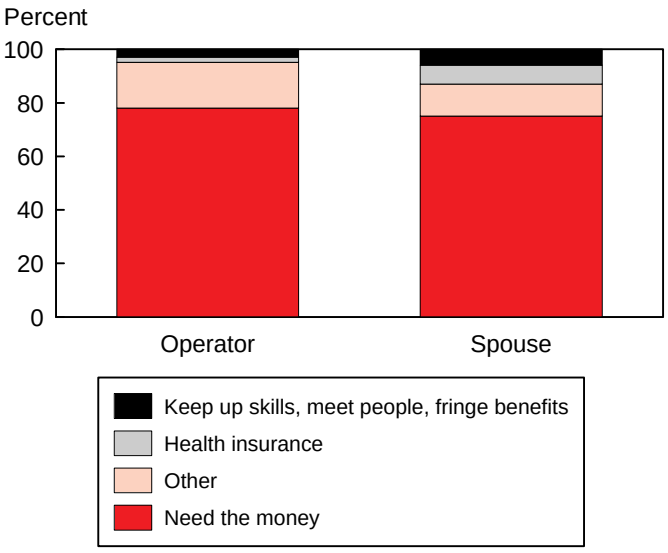
Choosing To Work Off Farm

For most farm families, off-farm employment is an important source of additional income, and can also be used to mitigate the risks associated with farming activities and to provide essential additional funds. Total household income tends to be higher when off-farm wages can be counted on, most notably on farms with sales less than $250,000. Off-farm employment is more prevalent on certain types of farms than others, and the age and the educational level of farm operators are factors that can affect the decision and ability to work off farm.

Data from the 1994 Agricultural Resource Management Study (formerly known as the Farm Costs and Returns Survey; see "Agricultural Resource Management Study") indicate that, in nearly 62 percent of farm households, someone (an operator, spouse, or both) received off-farm wages or a salary, and in a quarter of all operator households, both operator and spouse worked off farm. Farm operators and their spouses work off farm for many different reasons (fig. 1). In 1994, 78 percent of operators and 75 percent of spouses cited financial need as their primary motive for working off farm. Much smaller percentages (from 5 to 10 percent) worked off farm for reasons of health insurance, fringe benefits, keeping up skills, or meeting people. Seventeen percent of operators and 12 percent of spouses who reported that they worked off farm took their jobs for reasons other than those mentioned as options in the questionnaire.

Of those operators and spouses who said that they worked off farm because they needed the money, only 7 percent of operators and 4 percent of spouses reported that they used their wages solely to offset their farm and ranch expenses (fig. 2). Over half of operators (55 percent) and a larger share of spouses (68 percent) responded that they needed the money for expenses unrelated to their farming enterprises. Smaller shares, 36 percent of operators and 27 percent of spouses, used their wages to pay for both farming and other expenses.

Figure 1
Reasons given for holding off-farm jobs, 1994
Operators and spouses work off farm primarily for money rather than health insurance, keeping up skills, or fringe benefits



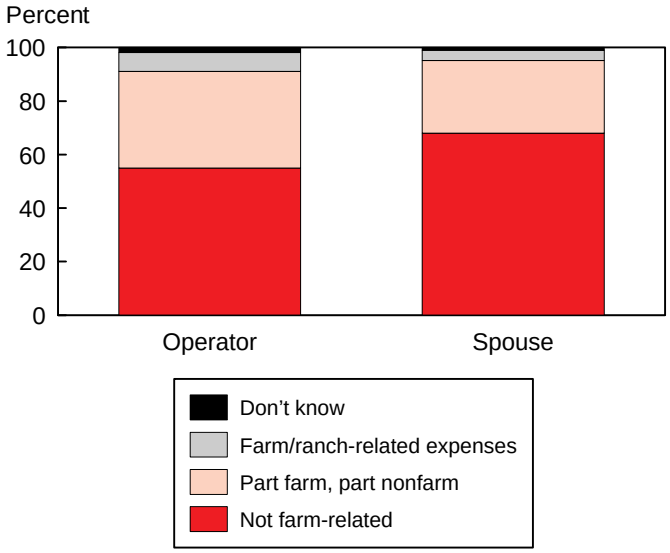
Note: Responses to the question: What was the main reason you, the operator, or your spouse had an off-farm job in 1994?
Source: USDA-ERS, Agricultural Resource Management Study, 1994, Version 1.

Penni Korb is an economist in the Farm Structure and Performance Branch, Resource Economics Division, ERS.

Figure 2

How farm families used the money from off-farm jobs, 1994

Most operators and spouses used off-farm earnings for expenses unrelated to farming



Note: Responses to the question: Did you, the operator, or your spouse need the money mainly for farm/ranch purposes, or was it needed for other things?

Source: USDA-ERS, Agricultural Resource Management Study, 1994, Version 1.

A regional glance at off-farm work reveals that the South, with almost 41 percent of U.S. farms, had the highest percentage of operator-only off-farm workers (44.8 percent) and a below average share of spouses that worked off farm (30.3 percent). The West, with 12.6 percent of farm households, accounted for 14.4 percent of the farms where no one worked off farm and only 9.4 percent of farms where both the operator and spouse had off-farm jobs. The Midwest, on the other hand, with over 40 percent of the farms, had the largest share of households where only the spouse worked off farm (50 percent). The Northeast had the smallest percentage of farm households (6.2 percent) and low percentages of off-farm work.

Younger, Better-Educated Farmers and Spouses Most Likely To Work Off Farm

Operator's age and level of educational attainment are both factors that are associated with off-farm employment. The average age for all farm operators was 54 years, while the average age if the operator alone worked off farm was 49 years. If only the spouse worked off-farm, the average operator's age was 51 (table 1). The youngest group (average operator age 46 years) was households where both operator and spouse held off-farm jobs, while the oldest (average age 62) ran farms where neither operator nor spouse had off-farm work. Some of the operators and spouses in this group may have been retired.

Almost 43 percent of operators and spouses who worked off farm had a high school diploma, while an additional 43 percent had some college and beyond (fig. 3). Only 13.6 percent of off-farm work was done by operators and spouses with less than a high school education, while this group constituted almost 30 percent of operator households where the farm was the household's sole source of income. An operator, spouse, or both are more likely to have off-farm income if they have at least a high school education, possibly due to their higher marketability.

Farmers With Off-Farm Jobs Run Smaller, Less Time-Intensive Operations and Rely Less on Government Payments

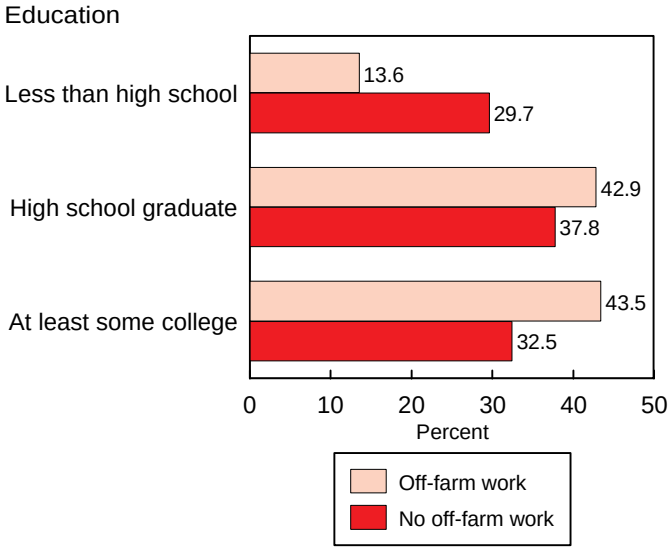
Operators of smaller farms that generate less than $50,000 in sales are far more likely to work off farm than their larger counterparts and probably have another occupation besides farming. Beef, hog, and sheep farmers are the most likely to have off-farm work, accounting for 48 percent of the instances when both operator and spouse work off farm (table 1). Dairy farmers worked off farm the least (2.2 percent when both work off farm). The intense time commitment dairy farming requires makes it difficult for an operator to hold an off-farm job. Raising beef, hogs, and sheep is less time-consuming.

Farm households with off-farm income tend to have higher incomes than those in which all income is derived from the farm. Households with no off-farm income had aver-

Figure 3

Distribution of farm operator and spouse off-farm employment by education, 1994

Most off-farm work was done by operators and spouses who had at least a high school diploma



Note: Based on responses to the question: Did you or your spouse work off this operation for wages or a salary in 1994?

Source: USDA-ERS, Agricultural Resource Management Study, 1994 Version 1.

Table 1

Characteristics of farm operator households by off-farm work, 1994

In nearly 62 percent of farm households, someone (the operator, the spouse, or both) worked off farm, resulting in household incomes that exceeded the average for all farm households

Item	Off-farm work				All households
	Operator only	Spouse only	Both work	Neither works	
Farm operator households (number)	438,987	279,115	516,170	761,753	1,996,026
Farm operator households (percent)	22.0	14.0	25.9	38.2	100.0
Operator age (average)	49	51	46	62	54
Operator age (percent):					
Younger than 35 years	10.9	8.2	12.4	5.6	8.9
35 - 44 years	21.6	25.3	31.3	9.7	20.1
45 - 54 years	32.7	26.1	33.5	13.9	24.8
55 - 64 years	22.5	25.7	20.3	19.9	21.4
65 years or older	12.4	14.7	na	50.9	24.9
Operator education (percent):					
Less than high school	14.7	13.9	12.6	29.7	19.8
High school	44.5	43.5	41.1	37.8	40.9
Some college	24.3	24.5	24.0	17.1	21.5
College	16.5	18.1	22.3	15.4	17.8
Operator major occupation:					
Farming	18.8	84.3	16.2	65.3	45.0
Other than farming	81.2	15.7	83.8	34.7	55.0
Household size (average)	3.0	3.2	3.4	2.5	2.9
Household size (percent):					
1 person	13.9	d	d	15.2	9.1
2 persons	34.1	45.2	34.9	55.0	43.8
3 persons	17.1	17.9	22.5	13.8	17.4
4 persons	20.1	18.4	21.2	7.8	15.5
5 persons or more	14.8	d	d	8.1	14.3
Farm income to household (average dollars)	-1,480#	13,958	-3,007	9,742	4,567
Farm income to household (percent):					
Negative	66.2	44.3	68.0	48.9	57.0
$0 - $9,999	22.7	16.8	20.8	25.7	22.5
$10,000 - $24,999	5.1	15.9	7.7	10.7	9.4
$25,000 - $49,999	3.5	10.2	2.5	7.3	5.6
$50,000 and more	2.5	12.9	1.0	7.4	5.4
Total off-farm income (average dollars)	47,852	30,472	55,106	23,624	38,051
Total off-farm income (percent):					
Less than $10,000	12.5	23.9	4.4*	43.4	23.8
$10,000 - $24,999	20.3	36.6	13.3	29.0	24.1
$25,000 - $49,999	42.7	27.9	42.3	16.5	30.5
$50,000 and more	24.5	11.6	40.0	11.1	21.6
Household income (average dollars)	46,372	44,430	52,099	33,366	42,618
Household income (percent):					
Negative	5.3	12.7	3.0*	13.1	8.7
$0 - $9,999	9.0	9.3	4.5*	20.5	12.3
$10,000 - $24,999	24.6	20.8	15.6	26.2	22.3
$25,000 - $49,999	35.9	30.0	38.6	21.2	30.2
$50,000 and more	25.3	27.1	38.3	19.0	26.5
Direct government payments (average dollars)	1,796	6,048	1,886	4,368	3,395
Direct government payments (percent)	11.6	24.9	14.4	49.1	100.0
Households with income below poverty level (percent):					
Based on farm income	89.6	65.0	90.5	74.4	80.6
Based on earned off-farm income	22.8	48.2	7.5	87.6	47.1
Based on total off-farm income	15.5	29.9	6.3	40.5	24.7
Based on total household income	19.2	25.6	10.5	33.0	23.1
Dependence on farm income (percent):					
Absolute value of farm income exceeds off farm	13.0	43.4	6.7	38.4	25.3
Actual value of farm income exceeds off farm	7.7	30.6	3.6	25.3	16.6
Farm operator households (number)	438,987	279,115	516,170	761,753	1,996,026
Time operator worked on farm (number):					
Hours per month	82	197	84	137	120
Hours per year	1,028	2,462	1,046	1,709	1,497
Operator by hours worked on the farm (percent):					
Less than 500 hours	28.1	na	38.3	30.7	100.0
500 - 999 hours	29.1	na	30.3	34.2	100.0
1,000 - 1,999 hours	25.9	8.5	31.4	34.2	100.0
2,000 hours or more	7.7	31.4	9.5	51.4	100.0

See notes at end of table.

—continued

Table 1

Characteristics of farm operator households by off-farm work, 1994–Continued

In nearly 62 percent of farm households, someone (the operator, the spouse, or both) worked off farm, resulting in household incomes that exceeded the average for all farm households

Item	Off-farm work				All households
	Operator only	Spouse only	Both work	Neither works	
Share of total hours worked on farm (percent):					
Operator	62.3	74.6	67.8	69.1	68.9
Spouse	21.9	12.6	15.2	15.7	16.0
All other workers	15.8	12.8	17.0	15.2	15.1
Commodity specialty (percent):					
Cash grains	19.8	26.2	18.9	17.2	19.5
Other crops	23.6	18.6	22.5	26.8	23.9
Beef, hog, sheep	46.9	35.4	48.4	39.9	43.0
Other livestock	6.3	6.3*	8.0*	6.4	6.8
Dairy	3.3*	13.5	2.2*	9.7	6.9
Legal form of farm organization (percent):					
Sole proprietorship	92.9	88.2	93.7	90.7	91.6
Legal partnership	3.9*	7.5	4.6	6.1	5.4
Family corporation	3.3*	4.2	1.7*	3.2	3.0
Farm net worth (average dollars)	232,769	407,919	211,492	478,183	345,418
Farm net worth (percent):					
Negative	na	na	na	.8#	.7*
0 - $49,999	15.1	na	15.2	7.5	10.6
$50,000 - $249,999	56.3	42.4	61.3	42.5	50.4
$250,000 - $499,999	17.5	29.3	14.9	25.6	21.6
$500,000 or more	9.8	24.9	8.1	23.6	16.7
Farm financial ratios (percent):					
Rate of return on assets	.2*	.2	.1	.1	.1
Rate of return on equity	7.6	4.6	6.3	8.5	7.0
Favorable	40.3	56.3	34.6	56.5	47.3
Marginal income	51.2	31.2	55.1	37.6	44.2
Marginal solvency	1.7*	9.4	3.9	4.6	4.5
Vulnerable	6.7*	3.2	6.4	1.3*	4.1
Farm tenancy (percent):					
Full ownership	57.7	33.9	49.7	56.8	52.0
Part tenant	32.3	52.1	40.9	35.4	38.5
Full tenant	10.0	14.0	9.4	7.8	9.5
U.S. region (percent):					
Northeast	5.6	7.3	5.8	6.5	6.2
Midwest	36.0	50.0	43.3	37.2	40.3
South	44.8	30.3	41.6	41.8	40.8
West	13.6	12.4	9.4	14.4	12.6
Farm sales (percent):					
Less than $50,000	87.0	41.7	85.4	68.1	73.0
$50,000 - $249,999	11.1	43.6	13.3	24.3	21.3
$250,000 - $499,999	1.1	10.0	.7	4.4	3.5
$500,000 or more	.9*	4.7	.6	3.2	2.2
Total value of production (percent)	10.3	27.6	12.1	50.0	100.0

* = The relative standard error of the estimate exceeds 25 percent, but is no more than 50 percent.
# = The relative standard error of the estimate exceeds 50 percent, but is no more than 75 percent.
d = Data insufficient for disclosure.
na = Not applicable.
Source: USDA, Economic Research Service, Agricultural Resource Management Study, 1994, Version 1.

age incomes of $33,366 for 1994, while off-farm wages boosted average household income to $52,099 when both operator and spouse held off-farm jobs. Similarly, off-farm employment reduced the share of farm households having incomes below the poverty level from an average of 80.6 percent, based solely on farm income, to 23.1 percent when off-farm income is included. The incidence of poverty, based on total household income, is lowest for operators and spouses who both work off farm (10.5 percent). Although off-farm income contributes substantially to total household income, farm income decreases as the operator has less time to devote to the farm operation. Above-average farm-generated income is recorded when the operator remains on the farm and is maximized when only the spouse works off farm, averaging $13,958 of farm household income compared with $4,567 for all farms.

Farm operations in which the operator held an off-farm job relied less on direct government payments (11.6 percent of government payments when the operator alone worked off farm and 14.4 percent when the operator and spouse worked off farm) than operations in which only the spouse or no one held an off-farm job. Almost 25 per-

Agricultural Resource Management Study

The Agricultural Resource Management Study (ARMS), formerly known as the Farm Costs and Returns Survey (FCRS), is a probability-based survey in which each respondent represents a number of farms of similar size and type. Thus, sample data can be expanded using appropriate weights to represent all farms in the contiguous United States. The ARMS is conducted annually by the Economic Research Service and the National Agricultural Statistics Service in all States, except Alaska and Hawaii.

Estimates based on an expanded sample differ from what would have occurred if a complete enumeration had been taken. However, the relative standard error (RSE), a measure of sampling variability, is available from survey results. The RSE is the standard error of the estimate expressed as a percentage of the estimate. Any estimate with an RSE greater than 25 percent has been identified.

The standard error of the estimate can also be used to evaluate the statistical differences between ARMS-based estimates. This article emphasizes differences between ARMS-based estimates only when estimates were significantly different at the 95-percent level or higher.

In the 1994 survey, both the farm operator and spouse were asked questions concerning the motives for and the disposition of off-farm wages and salaries. Specifically, the questions were as follows:

What was the main reason you (the operator) had an off-farm/ranch job? [Choose one response.]

(1) Keep up, use skills
(2) Meet people
(3) Need the money
(4) Health insurance
(5) Fringe benefits
(6) Other

If the respondent's answer was 3, then the following question was asked:

Did you (the operator) need the money mainly for farm/ranch expenses, or did you need it for other things? [Choose one response.]

(1) Farm/ranch-related expenses
(2) Other things
(3) Both equally
(4) Don't know

For the purposes of this article, off-farm work means working off the farm operation for wages or a salary or as a proprietor of an off-farm business.

cent of government payments were directed to farms where only the spouse worked off farm. Slightly less than half of government payments went to farms where no one held an off-farm job. With government payments declining, off-farm employment opportunities may become increasingly important.

From a production standpoint, half of the total value of production was generated on farms with no off-farm employment. Farm households in which both operator and spouse worked off farm contributed only 12 percent to the total value of production. The remaining 38 percent of the total value of production for all farms in 1994 was generated by operations where either the operator or spouse worked off farm.

While households with off-farm employment have a higher average household income, those with no off-farm work have higher average net worth. Farms on which neither operator nor spouse worked off farm had an average net worth of $478,183 in 1994, compared with $211,492 on farms where both spouse and operator worked off farm. This is a result of the high capital commitment required to sustain a full-time farming operation.

Conclusion

Off-farm wages and salaries are important additions to income for many farm households, and sometimes are important to the farm operation itself if used to support farm expenses. Increasing the likelihood of a successful farming operation can be accomplished in a number of different ways. Choosing to work off farm is one of the ways that farm households can counteract the variations in farm income.

For Further Reading. . .

Mary C. Ahearn, Janet E. Perry, and Hisham H. El-Osta, *The Economic Well-Being of Farm Operator Households, 1988-1990*, AER-666, USDA-ERS, Jan. 1993.

Thomas A. Carlin and Linda Ghelfi, "Off-Farm Employment and the Farm Sector," in *Structure Issues of American Agriculture*, AER-438, USDA-ERS, Nov. 1979, pp. 270-282.

Brian W. Gould and William E. Saupe, "Off-Farm Labor Market Entry and Exit," *American Journal of Agricultural Economics*, Vol. 71, No. 1, Nov. 1989, pp. 960-69.

Wallace E. Huffman, "Farm and Off-Farm Work Decisions: The Role of Human Capital," *Review of Economics and Statistics*, Vol. LXII, No. 1, Feb. 1980, pp. 14-23.

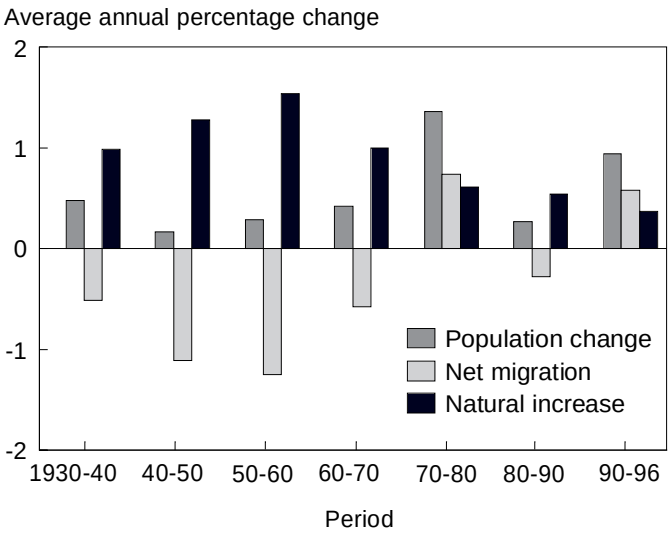
Janet E. Perry and Mary Ahearn, "Farm Women Blend Farm and Off-Farm Work," *Rural Development Perspectives*, Vol. 9, No. 3, June 1994, pp. 24-31.

Janet Perry, Norah Keating, Anne Effland, and Francis Shaver, "Gender and Generation on Family Farms," *Canadian Journal of Agricultural Economics*, 1995, Special Issue, pp. 115-30.

ERRATA

In the previous issue of *RDP* (vol.13, no. 3), figure 2 on page 4 should appear as follows:

Figure 2
Nonmetro demographic change, 1930-96
The 1970's and 1990's are exceptions to the long-term trend of net outmigration from nonmetro areas



Source: Calculated by authors from Census Bureau and other data.